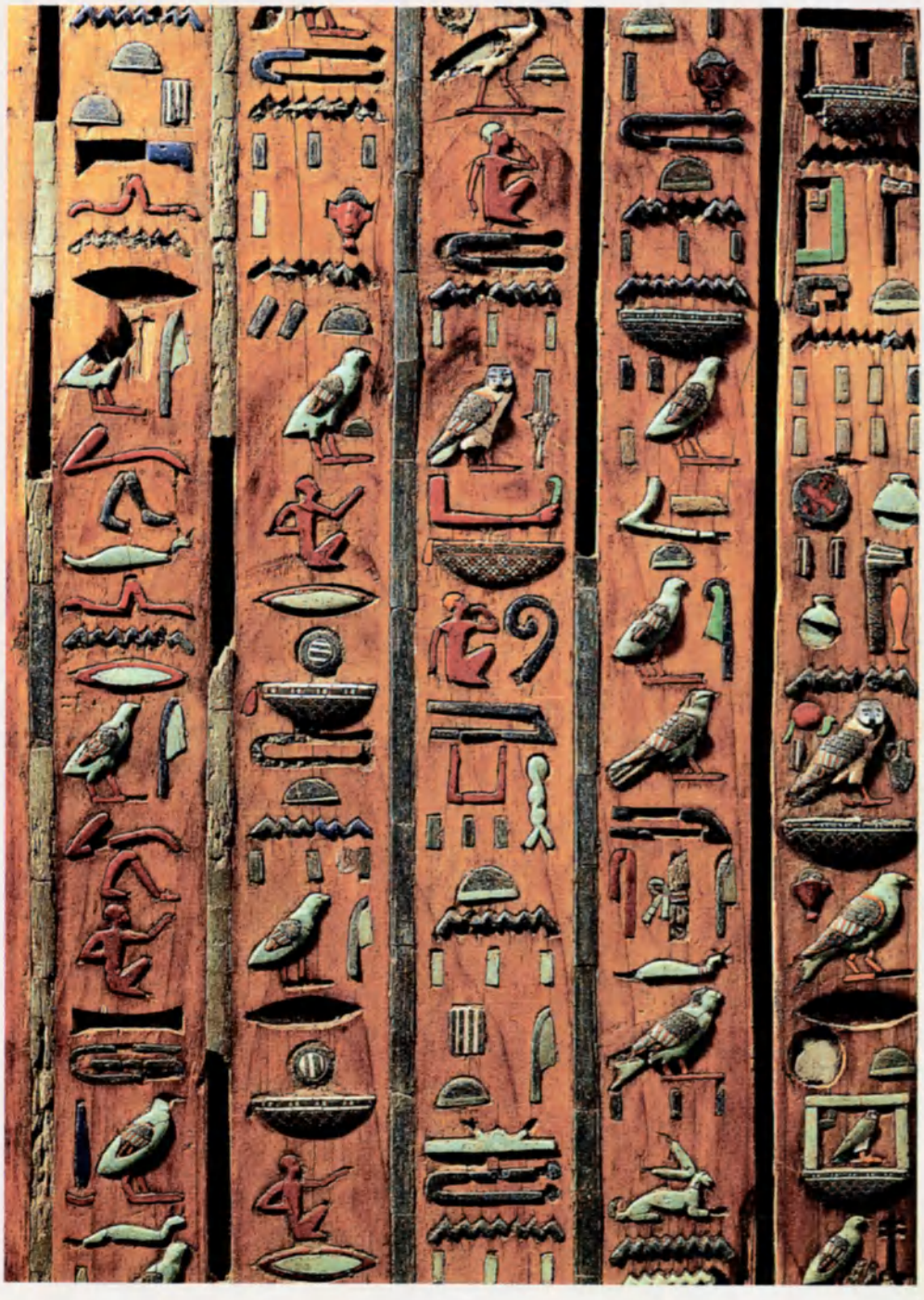
APRIL 1995

THE UNESCO COURIER

The origins of writing



INTERVIEW WITH
ERNEST J. GAINES

HERITAGE
QUITO, A CITY
NEAR TO HEAVEN

ENVIRONMENT
OMAN'S GREEN
STRATEGY

M 1205 - 9504 - 22,00 F

FRANCE: 22FF. - AUSTRALIA: A$7.90 - BELGIUM: BF160 - CANADA: C$5.75 - USA: $4.80 - SWITZERLAND: SF6.90 - NETHERLANDS: FI 10 - DENMARK: KR38

'OPERATION SOLIDARITY'

TWO YEARS ON

Two years ago, in our February 1993 issue, we invited readers to take part in "Operation Solidarity". The idea was to help all those in Asia, Africa, eastern Europe and Latin America who would like to read the *UNESCO Courier* but cannot afford to subscribe.
Since then more than 200 of you have taken out subscriptions on behalf of libraries, schools, universities, students and clubs. Some of you wish to take out a solidarity subscription for a third consecutive year. We should like to express our appreciation of your generosity.
Here are some extracts from the many letters from readers who, thanks to you, have been receiving the *Courier* and have written to express their gratitude. You will see from these excerpts that Operation Solidarity is extremely worthwhile.

■ "Our young people are trying to improve their grasp of several disciplines, and receiving the *Courier* is a precious asset for us. Here a dictionary costs the equivalent of a civil servant's monthly salary." (Mrs. Kalenga Makika Leya, Director of the Youth Cultural Centre, Kamira, Zaire).

■ "I enjoy reading the *Courier* immensely and share it with my associates. Remember we lack reading materials in our rural Third World!" (Deo N. Ntwari, Rukungiri, Uganda).

■ "Thank you for your precious contribution which is helping to open our club to all of humanity's cultural horizons." (Abdul Diallo, President of the Culture and Development Club, Conakry, Guinea).

■ "I am twenty and a student. Reading the *Courier* broadens my horizons and enables me to acquire immense, practical insight into the world around me." (Pascal Mutabazi, Ugandan student).

■ "I have studied at the university of Addis Abeba, and am now a teacher. Our currency is not easily convertible, so I am grateful for my subscription to the *Courier*; it allows me to satisfy my interest in the worlds of art, literature, science and culture." (Wendye Beshah, Welo, Ethiopia).

■ "This magazine is widely consulted by our readers and is a source of information appreciated by everyone." (A. Diallo, officer of the Ziguinchor public library, Senegal).

■ "I would like to thank you most cordially and sincerely on behalf of the readers of the Tambura Library. . . . Food self-sufficiency and health are vital requirements, but we also need books, magazines and documents that can help us extend and deepen our knowledge, strengthen our determination, direct our efforts and broaden our horizons. . . . The *UNESCO Courier* . . . allows us to refer to cultures different from our own and promotes global standards and values. . . ." (Amadou Zaga Traoré, public reading programme official, Tambura Library, Kéniéba, Mali).

■ "Our students, the beneficiaries of your offer, have a crucial role to play in Uganda's future." (Dr. Peter Miller, Institute of Teacher Education, Kampala, Uganda).

■ "Like my colleagues in the south, I have noted the gap existing between the obvious hunger of young people in cities for information and culture and our inability to fill that gap. . . . Your magazine can help to provide our young people with the spiritual nourishment they lack so badly." (Abdul Ajiji Saly, Garua town library, North Cameroon).

■ "We are dependent on our own resources, working as we do without textbooks, documentation or outside training. . . . We are determined to overcome our isolation from the outside world." (Mrs. Rakotomanga Rako Lalao, President of the Association of Teachers of French, Fort Dauphin, Madagascar).

■ "Thank you for your magazine that serves as a link between countries." (An Algerian student).

■ "I'd like to tell you how happy I am to be receiving your magazine again after a gap of several years and to pass it on to the Holguin hospital library." (Dr. Guillermo Ramirez de Arellano, Holguin, Cuba).

■ "How do I use the magazine? First my family reads it, then other teachers in my department. But my students (age 16 to 18) are the prime beneficiaries. We hold debates based on the themes. I am glad that in this way my students are able to learn about the world they live in." (Eliazar Espinosa Jimenez, Congajas, Cuba).

■ "Receiving the *Courier* is very much appreciated by those who are not in a position to buy it. . . . I use it in my classes." (Celisa Rodriguez, Cuba).

■ "I am a railroad worker in love with culture and would like to thank you on behalf of the small library I am organizing for my fellow workers." (Luis-Onel, Viña del Mar, Chile).

■ "Receiving the *Courier* is very important for us and our association's plans." (Syamsul Harahap, Executive Director of the Students Association of Al-Washliyah, Langkat, Indonesia).

■ "The Thana Para Youth Club organized a book and magazine fair at which the *Courier* held a place of honour. . . . We need foreign books and magazines but have no income because almost all of us are students." (Mr. Robiul Islam, President of Thana Para Youth Club, Bangladesh).

■ "I have just returned from a reporting assignment in a refugee camp in Thailand. I noted that the camp students have no cultural magazine. . . . I should like to thank you for offering them this subscription." (Mrs. Yolande Garcia, Blagnac, France).

■ "Thank you for the interest you have shown in our university." (Ms. Melina Tardia, Head Librarian, Parahyangan Catholic University, Bandung, Indonesia).

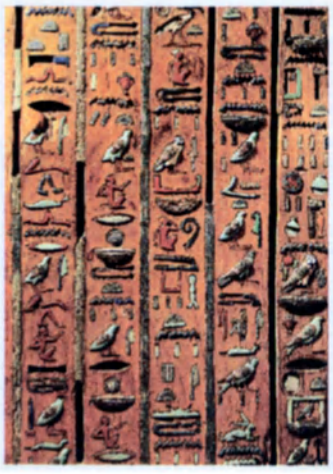
■ "You have provided our library with an international cultural magazine that gives our French-speaking Vietnamese readers interesting information about other cultures." (Nguyen Thé Duc, Director of the National Library of Hanoi, Viet Nam).

■ "Your *UNESCO Courier* gift subscriptions are especially welcome to help us reconstitute libraries." (Philippe Salord, Office of Linguistic and Educational Co-operation, Zagreb, Croatia).

If you would like to strengthen these ties of friendship, why not take out a solidarity subscription?
Fill in the form inserted in this issue, clearly indicating that you wish to take part in "Operation Solidarity",
and send it to: Solange Belin, "Operation Solidarity", UNESCO Courier, 31, rue François Bonvin, 75732 Paris Cedex 15 (France).

We will send you the particulars of the beneficiary of your solidarity subscritpion and pay all postal charges to the recipient's country.

Contents
APRIL 1995



Cover: Hieroglyphics in *pâte de verre* adorn the lid of the sarcophagus of Jedthotefanch (4th century B.C.), high priest of Thoth, the god regarded as the inventor of writing in ancient Egypt.

THE ORIGINS OF WRITING

5 Interview with **Ernest J. Gaines**

34 HERITAGE
Quito, a city near to heaven
by Jorge Enrique Adoum

39 GREENWATCH
Environment-friendly Oman
by France Bequette

38 ANNIVERSARY
Sâ'eb of Tabriz *by Hossein Esmaili*

43 GLOBAL VIEW
An international debate on literature today and tomorrow
by Alexandre Blokh and Abdelwahab Meddeb

45 ARCHIVES
The press and the public *by Paul Scott Mowrer*

46 LISTENING
A timeless moment *Isabelle Leymarie talks to Devasmita Patnayik*

48 BOOKS
A man and his time

49 1995: UNITED NATIONS YEAR FOR TOLERANCE
An uphill task BY TAHAR BEN JELLOUN

50 Letters to the Editor

8 **The written word**
by Xavier Perret

11 Mesopotamia: **The birth of writing**
by Béatrice André-Salvini

14 China: **From pictograms to pinyin**
by Rinnie Tang-Loaec and Pierre Colombel

16 Central America: **Colour-coded languages**
by Joaquín Galarza

19 Islam: **The calligrapher's art**
by Hassan Massoudy

22 Africa: **An inspired invention**
by David Dalby

24 Japan: **A four-in-hand script**
by Shiro Noda

26 The Western world: **The power of the pen**
by Henri-Jean Martin

30 **Fact file**

Consultant: Colette Haas

32 ***Commentary*** **by Federico Mayor**

THE UNESCO COURIER

48th year
Published monthly in 30 languages and in Braille

"The Governments of the States parties to this Constitution on behalf of their peoples declare,
"that since wars begin in the minds of men, it is in the minds of men that the defences of peace must be constructed . . .
"that a peace based exclusively upon the political and economic arrangements of governments would not be a peace which could secure the unanimous, lasting and sincere support of the peoples of the world, and that the peace must therefore be founded, if it is not to fail, upon the intellectual and moral solidarity of mankind.
"For these reasons, the States parties . . . are agreed and determined to develop and to increase the means of communication between their peoples and to employ these means for the purposes of mutual understanding and a truer and more perfect knowledge of each other's lives. . . ."
EXTRACT FROM THE PREAMBLE TO THE CONSTITUTION OF UNESCO, LONDON, 16 NOVEMBER 1945

THE UNESCO COURIER

48th YEAR
Published monthly in 30 languages and in Braille by Unesco, The United Nations Educational, Scientific and Cultural Organization.
31, rue François Bonvin, 75732 Paris CEDEX 15, France.
Fax: (33-1) 45.66.92.70

Director: Bahgat Elnadi
Editor-in-chief: Adel Rifaat

EDITORIAL STAFF (Paris)
Managing Editor: Gillian Whitcomb
English edition: Roy Malkin
French edition: Alain Lévêque, Neda El Khazen
Spanish edition: Miguel Labarca, Araceli Ortiz de Urbina
Features: Jasmina Sopova
Art Unit/Production: Georges Servat
Illustrations: Ariane Bailey (Tel. 45.68.46.90)
Documentation: José Banaag (Tel. 45.68. 46.85)
Liaison with non-Headquarters editions and press: Solange Belin (Tel. 45.68.46.87)
Secretariat: Annie Brachet (Tel. 45.68.47.15),
Administrative Assistant: Theresa Pinck
Selection in Braille in English, French, Spanish and Korean: Mouna Chatta (Tel. 45.68.47.14)

NON-HEADQUARTERS EDITIONS
Russian: Irina Utkina (Moscow)
German: Dominique Anderes (Berne)
Arabic: El-Said Mahmoud El-Sheniti (Cairo)
Italian: Mario Guidotti (Rome)
Hindi: Ganga Prasad Vimal (Delhi)
Tamil: M. Mohammed Mustafa (Madras)
Persian: Akbar Zargar (Teheran)
Dutch: Claude Montrieux (Antwerp)
Portuguese: Benedicto Silva (Rio de Janeiro)
Urdu: Wali Mohammad Zaki (Islamabad)
Catalan: Joan Carreras i Martí (Barcelona)
Malay: Sidin Ahmad Ishak (Kuala Lumpur)
Korean: Yi Tong-ok (Seoul)
Swahili: Leonard J. Shuma (Dar-es-Salaam)
Slovene: Aleksandra Kornhauser (Ljubljana)
Chinese: Shen Guofen (Beijing)
Bulgarian: Dragomir Petrov (Sofia)
Greek: Sophie Costopoulos (Athens)
Sinhala: Neville Piyadigama (Colombo)
Finnish: Marjatta Oksanen (Helsinki)
Basque: Juxto Egaña (Donostia)
Thai: Sudhasinee Vajrabul (Bangkok)
Vietnamese: Do Phuong (Hanoi)
Pashto: Nazer Mohammad Angar (Kabul)
Hausa: Habib Alhassan (Sokoto)
Ukrainian: Volodymyr Vasiliuk (Kiev)
Galician: Xabier Senín Fernández (Santiago de Compostela)

SALES AND PROMOTION. Fax: 45.68.45.89
Subscriptions: Marie-Thérèse Hardy (Tel. 45.68.45.65), Jocelyne Despouy, Jacqueline Louise-Julie, Manichan Ngonekeo, Michel Ravassard, Mohamed Salah El Din (Tel. 45.68.49.19)
Customer service: Ginette Motreff (Tel. 45.68.45.64)
Accounts: (Tel. 45.68.45.65)
Shipping: (Tel. 45.68.47.50)

SUBSCRIPTIONS. Tel.: 45.68.45.65
1 year: 211 French francs. 2 years: 396 FF.
Students: 1 year: 132 French francs
Binder for one year's issues: 72 FF
Developing countries:
1 year: 132 French francs. 2 years: 211 FF.
Payment can be made with any convertible currency to the order of Unesco

Individual articles and photographs not copyrighted may be reprinted providing the credit line reads "Reprinted from the *Unesco Courier*", plus date of issue, and three voucher copies are sent to the editor. Signed articles reprinted must bear author's name. Non-copyright photos will be supplied on request. Unsolicited manuscripts cannot be returned unless accompanied by an international reply coupon covering postage. Signed articles express the opinions of the authors and do not necessarily represent the opinions of Unesco or those of the editors of the *Unesco Courier*. Photo captions and headlines are written by the *Unesco Courier* staff. The boundaries on maps published in the magazine do not imply official endorsement or acceptance by Unesco or the United Nations. The *Unesco Courier* is produced in microform (microfilm and/or microfiche) by: (1) Unesco, 7 Place de Fontenoy, 75700 Paris; (2) University Microfilms (Xerox), Ann Arbor, Michigan 48100 U.S.A.; (3) N.C.R. Microcard Edition, Indian Head Inc., 111 West 40th Street, New York, U.S.A.; (4) Bell and Howell Co., Old Mansfield Road, Wooster, Ohio 44691, U.S.A.

IMPRIMÉ EN FRANCE (Printed in France)
DÉPOT LÉGAL: C1 - AVRIL 1995
COMMISSION PARITAIRE N° 71844 - DIFFUSÉ PAR LES N.M.P.P.
Photocomposition: Le Courrier de l'Unesco.
Photogravure, impression: MAURY IMPRIMEUR,
Z.I. Route d'Étampes, 45331 Malesherbes
ISSN 0041-5278 N° 4-1995-OPI-95-536A

This issue comprises 52 pages and a 4-page insert between pages 2-3 and 50-51.

Month by month

It may, on the face of it, seem strange to look back at the origins of the world's diverse forms of writing at the very moment when a universal new system is being born before our very eyes. Unimaginable not so long ago, computerized script has become part of our daily lives, promising access to the dazzling new world of information, learning and communication that we described in our February issue on "the multimedia explosion".

Some think that this new electronic script will replace all earlier writing systems and consign them to oblivion. Are they right?

While the present issue of the *Unesco Courier* does not pose this problem in such specific terms, its contents suggest that the answer to it will probably be "no". By shedding light on the great variety of forms and techniques used to make the spoken word "visible", it shows how close and intricate is the relationship between a language and the writing system used to record it. Arabic would not be Arabic if it were written in Chinese characters. Turkish is not the same language when written in Latin script. The death knell starts to sound for a language when its writing system disappears—because a language, its script and its music belong to a single aesthetic.

The subject of writing takes us into one of the deepest recesses of a people's identity. Learning to write has always been a key stage in the process whereby a person gains access to the collective memory and becomes a full member of the national community, part of its fabric of complicities and conflicts.

Tempted by the boundless possibilities for travel, exchange and new experiences offered by globalization, will late twentieth century people continue to feel this need for roots, this desire for familiar faces, landscapes and rhythms? We think they will. The further they go, the more they will need familiar landmarks. The more exposed they are to communication that is rich in information but poor in meaning, the more sustenance they will need from the roots of their own cultures. The written language, drawing its vitality from the works produced in it over the centuries, can safeguard this heritage and defend it against the growing threats of anonymity and oblivion.

BAHGAT ELNADI AND ADEL RIFAAT

ERNEST J. GAINES

talks to Bernard Magnier

Ernest J. Gaines (born 1933) grew up on a Louisiana plantation where, at the age of nine, he started work as a potato picker, earning 50 cents a day. When he was fifteen he joined his mother in California, where he began to study and discovered a passion for reading. Disappointed to find in books nothing about the world he knew, he decided to start writing himself. His first short stories were published in 1956 and were followed by novels including *Of Love and Dust* (1967) and *The Autobiography of Miss Jane Pittman* (1971), which brought him to the attention of a wide American public. Considered a major "Southern novelist", in 1994 he received the U.S. National Book Award for *A Lesson before Dying*.

■ Tell us something about your childhood and family background.

— For more than a century my family lived on a sugarcane plantation in Louisiana and I am the product of a mixture of Africans, Indians and whites. That's all I know about my ancestors. I don't know which African country or which Indian tribe they came from.

So I was born on the plantation where my parents worked, and that was where I first went to school. Later I attended school at New Rose, a nearby town that I call Bayonne in my books, until I was fifteen. Then my parents separated. My mother went to live in California and I followed her there to continue my studies. It was then that I became interested in writing and started to frequent public libraries, which in California were open to everyone, not just whites.

■ What were the first books you read, the ones that most influenced you?

— I liked to read fiction. There were no black writers and so I started by reading Southern writers. But I didn't think much of the demeaning way they spoke of blacks. I turned to European writers, particularly the Russians—Gogol, Turgenev and Chekhov—who described peasant life in a rich and interesting way. My first novel, *Catherine Carmier*, was inspired by Turgenev's *Fathers and Sons*. Later I discovered Maupassant and Flaubert.

■ Did you take these writers as your models?

— All these European writers only half satisfied me because they only talked about their own people, and I couldn't find myself in their work. I wanted to talk about my people, so when I was around sixteen or seventeen years old I started to write.

When I was twenty, after I had done my military service, I went to college, where I studied creative writing and English literature. It was there that I discovered Hemingway, Steinbeck, Joyce and others. But none of these great novelists had any particular influence on me. As someone once said, to take from one person is plagiarism but to take from everybody is genius!

■ What was your first published work?

All the great writers are regionalists. Faulkner wrote about Mississippi, Homer about Greece, Balzac about Paris, Shakespeare about a kind of England. But that doesn't mean they're not universal.

— A short story called *The Turtles*, which appeared in 1956 in a college literary review in San Francisco. The turtles were a kind of challenge for two young fishermen. Both of them are taken by their fathers to a young lady to initiate them to sex. The little boy who is afraid of the turtle is also afraid of the girl. The little boy who's brave enough to fish and catch the turtles obeys the father. I am very proud of this short story. It has just been republished by the journal of the university where I teach now. Thirty-five years later!

■ **When did you turn to writing novels?**

— A literary agent read *The Turtles* and liked it. She contacted my professor, and she encouraged me to write my first novel. I had already written what I thought was a novel when I was nineteen years old. I sent it to a publisher, who turned it down and sent it back to me. I threw it on the fire. Ten years later I went back to this novel, which took me five years to finish and gave me a lot of trouble. But all the time I was learning how to write. After it had been substantially rewritten a dozen or more times and returned to me seven times by the publisher, it was finally accepted. That was how *Catherine Carmier* came to be published by Athenaeum. Thirty-five hundred copies were printed, and I doubt even twenty-five hundred were sold. The rest were remaindered at 25 cents. If you could get your hands on an original copy today, you'd have to pay more than a hundred dollars for it.

■ **In the United States you are thought of as a "Southern writer". Do you think that label accurately describes a literary category or is it too narrow?**

— It's too narrow. I have been categorized "a black writer", "a Southern writer", "a Californian writer" because I lived in California, "a Louisiana writer" because I wrote about Louisiana. . . . I don't feel I fit into any of these categories. I just try to be a decent writer.

■ **And yet almost all your novels are set in a small area, Bayonne Parish. . . .**

— All the great writers are regionalists. Faulkner wrote about Mississippi, Homer about Greeee, Balzac about Paris, Shakespeare about a kind of England. But that doesn't mean they're not universal. People write about what they know best, and readers respond to that wherever they happen to live. *The Autobiography of Miss Jane Pittman* has been translated into several languages, and readers of all races have written to me and said they felt that the old lady was somebody they recognized.

■ **In a way, isn't your Bayonne Parish the Louisiana equivalent of Faulkner's Yoknapatawpha County, in Mississippi?**

— I did get the inspiration for the parish of Bayonne from Faulkner's mythical Yoknapatawpha County and the use of the multiple point-of-view in the novel. But Faulkner himself was influenced by Sherwood Anderson, whom he knew, and by James Joyce's writings about Dublin. So just as Faulkner inherited from them, I inherited from Faulkner. It's a continuing process.

I certainly feel close to Faulkner. We both belong to the South. We write about the same things—life in small towns, the everyday struggles of poor people, the influence of big land-owners on small farmers, race problems. And Mississippi isn't far from Louisiana.

■ **In your novels a breaking point often occurs as a result of a love affair, as if this kind of relationship is a crucible for all kinds of taboos and conflicts.**

— That is true of some of my novels, but not all. *A Lesson before Dying* is the story of an uneducated young black condemned to death for a crime he did not commit and a black schoolteacher who restores his dignity before he dies. Love relationships are not the only situations that breed conflict; it is constant. The major conflict in my work is when the black male attempts to go beyond the line that is drawn for him. But you've also got conflict between young and old, between the desire to go back to the place where you were born or to stay where you are, between religious feeling and atheism. . . . There has to be a conflict before there can be a story and before the story reveals racial tensions.

■ **Early in their careers, the French-speaking writers of black Africa and the Caribbean gathered beneath the banner of the "négritude" movement to**

BIBLIOGRAPHY

A Lesson before Dying,
New York, Random House, 1994.

Of Love and Dust,
New York, Random House, 1994.

Catherine Carmier,
New York, Random House, 1993.

A Gathering of Old Men,
New York, Random House, 1992.

In my Father's House,
New York, Random House, 1992.

The Autobiography of Miss Jane Pittman,
London, Bantam, 1982.

Bloodline,
New York, Norton, 1976.

These books by Ernest Gaines are currently available in paperback.

assert black cultural values. Do you think this movement is still relevant?

— Yes, I do. Even if I don't belong to this school or to any other school, I accept that this idea of négritude, put forward by writers who express themselves in French, can provide young writers with the bearings that are so lacking. In my own little sphere I do the same thing as these African and West Indian writers. I try to describe the daily lives of African-Americans as well as I can. I think I'm doing the same thing as they are without putting myself in a box.

■ **What are your feelings about Africa?**

— I have never been there. I feel very close to Africa because of my origins but also because every human being ought to feel concerned about the very serious things that are happening there. I sympathize with the sorrows of Africa because they are similar to those we experienced in the South forty-odd years ago. But there are problems in the rest of the world, too. I like African literature and music just as I like those that come to us from Europe and the Americas. My culture is, perhaps above all, Western.

■ **Do you read African writers?**

— A little. Not nearly as much as I should!

■ **Do you feel that there is a black cultural community in the United States?**

— I don't think there is any kind of school of black culture in the United States today. The expression "black community" is very vague. Is there a white community? I don't know. Nevertheless, black writers tackle the problems they know well, but with different approaches. Toni Morrison, Alice Walker, Maya Angelou and I share common preoccupations.

■ **These days there are plenty of meetings, anthologies, book series and critical works on black African and Afro-American literature and so on. Do you think it's ludicrous to lump together writers from the United States, the Caribbean and Africa because they are black?**

— No, not at all! I approve of this kind of thing. It is important for us black writers to meet and talk because our works are not taught as much in colleges as those of whites. All the same I don't spend too much time at those gatherings; I prefer staying at home and writing.

In my own little sphere I do the same thing as these African and West Indian writers. I try to describe the daily lives of African-Americans as well as I can.

■ **Louisiana is presented in your work as a land of conflict but also as a place of meetings, of peace and compromise. In spite of "the sound and the fury", your writing seems more serene than that of other black writers.**

— I write from my own viewpoint. I don't see the world as Jimmy Baldwin or Richard Wright did. I may not have suffered racism as directly as either one of those men did, and I haven't lived in large cities as they did—in Harlem or Chicago's south side—but we have fought for the same causes. I went to California when I was very young, to a decent, small town where I was completely integrated into the school. There were people of all backgrounds. There were whites, hispanics, native Americans and Asians.

That doesn't stop me from writing about serious subjects. In *A Lesson before* Dying an innocent person is sent to the electric chair. I was criticized for *The Autobiography of Miss Jane Pittman*, because at the time of the civil rights struggle the life of a woman aged 110 was not a topical subject! For me it was primarily a piece of literary work, sure, but I also described in this book terrible events that were not unconnected with what was going on. I'm doing what the others are doing, just more quietly.

■ **Do you think that things have changed in North America in this respect?**

— There have been some changes in the last forty years, but I don't feel that writers and artists have changed very much in their choice of subjects. The change has not been substantial enough to halt the struggle against racism. The race problem still exists—that's why I have been writing about it for forty years. On the other hand, the work of black writers is certainly far more widely accepted now. Today I am accepted on the same footing as others, and that would have been impossible thirty years ago.

■ **Have things changed in everyday life?**

— Some people have changed, especially in educated circles. The situation has changed for some people, progress has been made. People have accepted black people's participation in public life. Times have changed from the days when Nat King Cole had his show cancelled simply because he held a white female's hand up on the stage at the end of a show when the credits were going on. But so many serious problems are still unsolved—education and unemployment, for example. There's still a long way to go. ■

BERNARD MAGNIER
is a French journalist specializing in African literature.

The written word

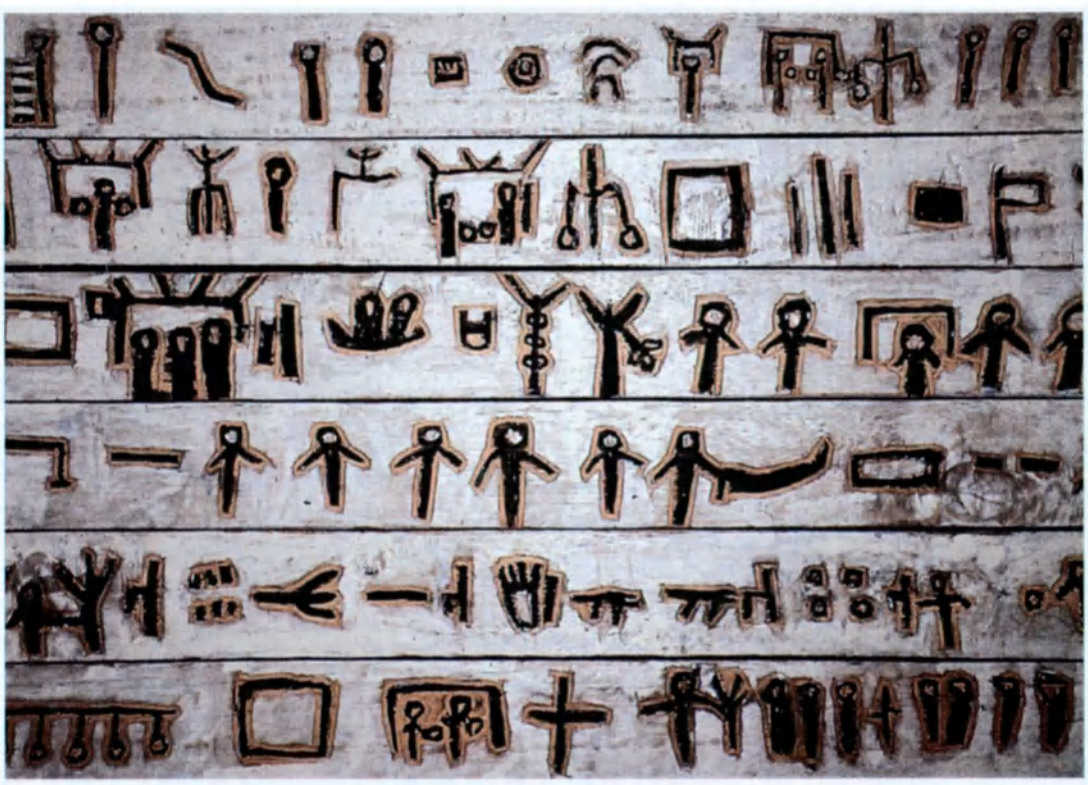
by Xavier Perret

Around 35,000 years ago, prehistoric man made the first paintings on cave walls and ceilings. It was not until much later that the earliest writing systems using signs emerged in Mesopotamia and in Egypt.

The appearance of writing coincided with the birth of cities. Above, detail of an Assyrian relief from the palace of Sargon II at Dur Sarrukin (8th century B.C.) shows a man holding a model of a city.

Writing, as a system of symbols representing a structured language, made its appearance only in the middle of the fourth millennium B.C. in the land of Sumer, Mesopotamia. This system, consisting originally of pictograms, evolved gradually in the direction of abstraction, thus increasing its capacity to reproduce the whole of human discourse. Some time later, at the beginning of the second millennium B.C., and on the other side of the world, Chinese writing emerged, also in pictorial form, while the Egyptian and Mayan systems, whose origins are still unknown, were likewise based on the use of pictures as signifiers.

The figurative look of these early graphic symbols recalls humanity's very first attempts to depict things, the cave paintings of the Palaeolithic period. What are we to make of the representations of beasts and men to be seen in the rock art of 35000 to 18000 B.C.? Though we cannot find any correspondence with a structured language in them, what we do observe is a desire to represent subjects in graphic form that bespeaks the existence of a common language—or at least of common referents—within the



Above, sacred inscriptions painted on stone by Tibetan refugees in Ladakh (India).

Left, pictograms carved in wood around 1900 by a craftsman of the Dayak people of Sarawak, on the island of Borneo.

group, and hence the existence of a common way of thinking.

Thousands of years, however, separate the paintings left behind by the Aurignacian and Magdalenian cultures from the earliest non-figurative graphic symbols, i.e. numbers, whether they be the ancient Chinese system of rods or the Sumerian system of keeping accounts with incised hollow clay balls.[1] It was in the course of this very long period that the Neolithic revolution took place, and the relationship between human beings and their environment underwent a radical change, the hunter-gatherer becoming a producer.

By the stylization and combination of the original icons, writing systems arrived at the representation of speech and thought.

The earliest Sumerian logograms, for instance, like ancient Chinese pictograms, represented basic concepts that needed to be interpreted for the reader to reconstitute the message. Castes of scribes spent centuries improving this method of representation before finally arriving at systems whereby all the nuances of language could be set down.

From symbols to sounds

While the emergence of forms of writing in Sumer, in China and, perhaps, in Central America can be explained in terms of evolution, the various phonetic systems (alphabets or syllabaries) found all over the world are thought to have originated from the dissemination of a primeval model that was borrowed, imitated and appropriated by one society and language after another.

The first system of phonetic (probably syllabic) transcription seems to have been the Phoenician system, the earliest signs of which may be traced back to the thirteenth to eleventh centuries B.C. Although the precise origin of

A 4th-century Byzantine illuminated manuscript.

Top, detail of a Hittite hieroglyphic inscription (9th-8th centuries B.C.) bearing the names of King Telipinus and his son Suppliluliuma, who conquered Aleppo around 1354 B.C. The Hittites, who for 5 centuries ruled much of what is now Asian Turkey, used ideograms borrowed from the Babylonians.

Above, the oldest known example of the Phoenician alphabet. An inscription on the tomb of king Ahiram of Byblos, it dates from the 13th century B.C.

The pictograms drawn on this 16th-century parchment from Bolivia, right, were intended to explain the catechism to the Indians.

Phoenician characters remains obscure (they were probably derived from Sumerian ideograms), experts now agree that, certainly in a majority of cases, they were the matrix from which have developed the various phonetic alphabets now in use throughout the world.

The use of phonetic scripts was propagated by population movements like the migration of Aramaean nomads into Mesopotamia, by the activities of traders such as the Phoenicians in the eastern Mediterranean, and by the establishment of political power (e.g. the Dorian invasions in Greece), or religious power (e.g. Christian, with the translation of the Bible into Slavonic); but the success of these scripts was undoubtedly due in the main to the fact that they were so much easier to use than clumsy cuneiform or the complex hieroglyphics of ancient Egypt.

Each of the societies that, one after another, borrowed the Phoenician system had to adapt it to its own requirements. Thus it was that the Aramaic, Hebrew and Nabataean scripts came into being, subsequently giving rise to other scripts, again adapted and transformed—Greek and Arabic, which in their turn gave rise to others.

At this point we are no longer dealing with dissemination or evolution but with contamination.

The return of the image

What function does writing then serve? To begin with, it had two distinct purposes. In China, it was primarily used to communicate with the other world, as is shown by such archaeological objects as incised tortoise shells and "oracle bones". Its function was thus, initially, a magical one, quite unlike what was happening in Sumer, where its first use was for keeping accounts. Elsewhere, in Egypt or among the Maya, writing was known only to the priesthood and served a religious purpose, while in Europe at a later date it was for a long time the exclusive preserve of the clergy.

Since both the spiritual and the temporal power were very often in the hands of the same individuals, writing, which was linked, whether closely or distantly, to magic, became involved in the establishment of the legal and political authority. Long the prerogative of rulers, it filtered down only slowly to the other strata of society. When the Maya priests disappeared, for example, the secrets of Maya writing died with them, and it was centuries before the Egyptian demotic script appeared, to be used in public administration, commerce and literature. In the West, widespread literacy dates back only to the late nineteenth century, and even today none of the modern industrialized societies can boast a 100 per cent literacy rate.

Paradoxically, it is in these latter societies, where the law is set down in writing and writing therefore often has the force of law, that communication through images has been gaining ground considerably for the last century and a half. Whilst the invention of printing may for a while have halted the evolution of writing or held it in check, the return of the image, together with the fact that new ideograms and pictograms are constantly appearing all around us, seems to show that that evolution has taken off again. ■

XAVIER PERRET,
of France, is a translator and teacher of English.

1 See the *UNESCO Courier*, November 1993 ("The Story of Numbers").

The birth of writing

by Béatrice André-Salvini

In ancient Mesopotamia writing was invented in response to the need to keep accounts and make lists. The earliest recorded calculations were inscribed on tablets of clay, an abundant material in the valleys of the Near East.

Writing appeared for the first time around 3300 B.C. in the land of Sumer, during a period of far-reaching change which coincided with the construction of the first towns. At this time, the political, social and cultural conditions needed for writing to be invented were all met.

The city of Uruk, in the south of the country, was prosperous and began to engage in long-distance trade to import the raw materials which it lacked.

The temple of the tutelary god became a great administrative centre, placed under the authority of a political and religious leader, the "king-priest". Relations became complex and the temple administrators had to manage movements of personnel, salaries and incoming and outgoing goods and flocks of animals. Since the capacity of the human memory is limited, it became necessary to find a new and unified system of reference enabling oral information to be preserved and recovered later on in spoken form. This is how writing was born. It represents symbols of society in images. New concepts were therefore depicted in an abstract form in the earliest attempts at writing. The word for sheep, the animal which had to be counted most often, was, for example, first represented by a cross in a circle—the animal in its enclosure.

Writing started out as a simple memory aid

Mother-of-pearl sheep and goats encrusted into a lapis lazuli mosaic adorn the "Standard of Ur" (above), a Sumerian artefact produced around 2800-2100 B.C.

Towards the middle of the third millennium signs were split up, reversed and simplified. No longer used to represent an object but the sounds that made up its name, they lost some of their symbolic content. Cuneiform writing had reached the stage at which it could express ideas.

but its form and content gradually developed in the following centuries.

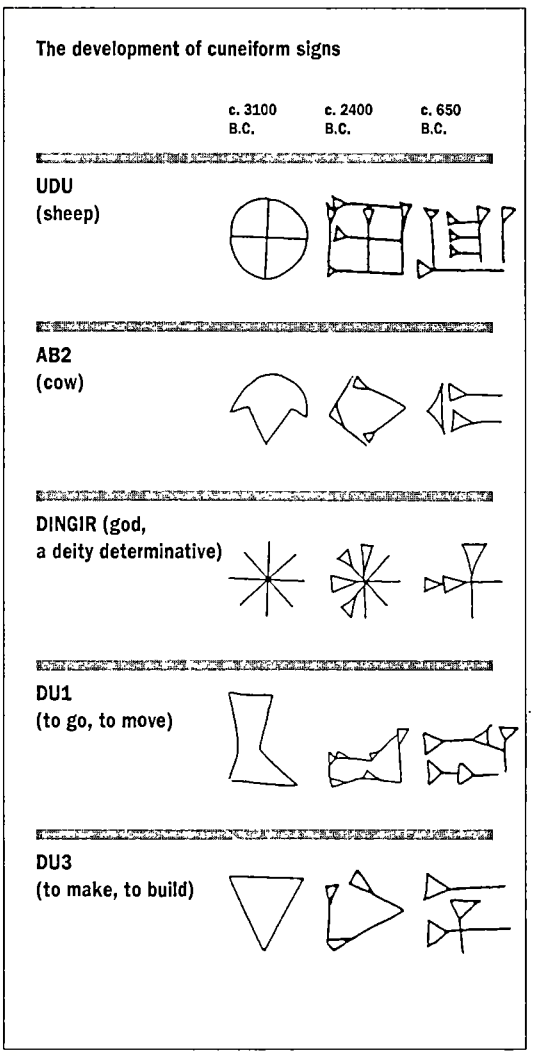
The form of the linear script, incised with a pointed tool, soon changed. The signs lost all resemblance to the original figurative outline. This phenomenon was due to the medium used to support writing, i.e. clay, which was the only eligible natural material in southern Mesopotamia. Its constraints led to the transformation of the signs. As it is hard to draw curved lines on soft clay, they were broken down into straight lines which, instead of being incised, were soon imprinted using a reed calamus with a triangular end which produces wedge-shaped impressions. These may be horizontal, oblique or vertical, and their different combinations form a sign.

As the script changed, the scribes also endeavoured to increase the range and efficiency of the ideographic system by creating composite signs. To simplify writing, attempts were made to reduce the number of signs, so that the same ideogram was soon used to transcribe similar actions or concepts. The reader had to choose between these different meanings by reference to the context, and this was not always easy.

To remedy this difficulty of interpretation, "determinatives" were invented; these were placed at the beginning or end of words and were probably not pronounced. They specified the category to which the concept that was expressed belonged: God, man, planet, bird, country, stone object, etc. The need to transcribe proper nouns and grammatical elements led to the invention of signs representing sounds (phonograms) by ridding ideograms of their meaning and retaining only their sound.

These techniques led to a diminution in the repertoire of signs, which was reduced from 900 in the early period to about 500 around 2400 B.C. It thus became possible to develop a system which was partly syllabic, enabling written sentences to represent linear relationships between words and to represent all the nuances of the spoken language.

A neo-Sumerian administrative tablet dating from the end of the 3rd millennium B.C.



The content of the texts was also enriched, reflecting the new possibilities for reproducing all the elements of the Sumerian language.

From book-keeping to narrative

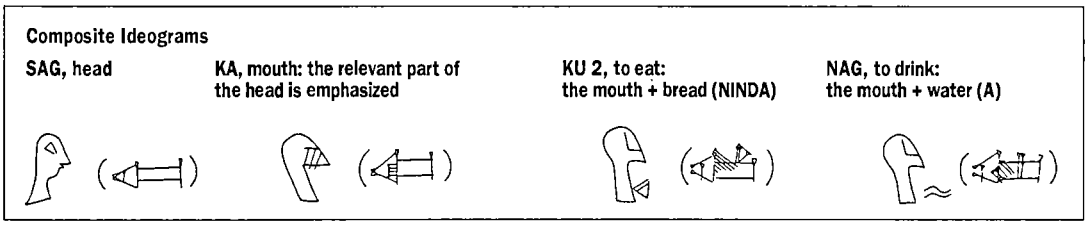
The first written versions of Sumerian literature, in which only the roots of verbs were transcribed, leaving the reader to fill in the missing elements, appeared in the era of the archaic dynasties (around 2700 B.C.), together with contracts and other commercial documents.

Towards the middle of the third millennium signs were split up, reversed and simplified; no longer used to represent an object but the sounds that made up its name, they lost some of their symbolic content. Their forms increasingly changed. By now the writing of grammatical forms was well defined and cuneiform writing (from the Latin *cuneus* or wedge) was able to express ideas. It spread beyond the confines of Sumerian territory, and its adaptation for use in languages other than Sumerian was to become the main factor in its evolution.

Around the year 2340 B.C., the new masters of the country, the Akkad emperors, used the Sumerian script to transcribe their own Semitic language, Akkadian. At the end of the third millennium, a brief return of the Sumerians to power witnessed an effort on the part of poets, writers and scholars to transcribe and circulate the great literary works of the oral tradition: hymns to the gods, myths, prayers, epics, philosophical essays and collections of knowledge. The Gilgamesh epic was to become the most widely disseminated work. Around the year 2000 B.C., Sumerian disappeared from Mesopotamia as a spoken language and was replaced by Akkadian, which then split into two dialects: Assyrian in the north and Babylonian in the south. But Sumerian was to remain the language of erudite culture until the last days of cuneiform writing in the first century of the Christian era.

Despite its complexity, this system spread throughout the ancient Near East, to be used for writing many different Semitic, Indo-European (such as Hittite) or "Asiatic" languages. The decline of cuneiform began in the first millennium when Aramaean nomads penetrated into Mesopotamia and introduced their own written language using a linear alphabet which was easy to learn and handle, was readily accessible and could be set down on a lighter material, i.e. papyrus. Cuneiform writing, which was clumsy and was practised only by a small number of initiates, gradually declined. ■

This clay tablet from Lower Mesopotamia (4th millennium B.C.) is a title deed with the owner's hand appearing, above left, as a kind of signature.


Composite Ideograms
SAG, head
KA, mouth: the relevant part of the head is emphasized
KU 2, to eat: the mouth + bread (NINDA)
NAG, to drink: the mouth + water (A)

Thirty letters of cuneiform script are inscribed on the finger-sized piece of clay, below, unearthed in 1948 on the site of the ancient city of Ugarit (present-day Ras Shamra in Syria). Dating from the 14th century B.C., the object reveals one of the earliest attempts to create an alphabet.

BÉATRICE ANDRÉ-SALVINI is a French Assyriologist who is head curator and inscription specialist in the department of Oriental antiquities of the Louvre Museum, Paris. Among her published works are *The Birth of Writing in Ancient Mesopotamia* (Asian Art V, Washington, 1992), *L'invention de l'écriture* (Nathan, Paris, 1986) and *Les tablettes du monde cunéiforme* (Bibliologia, Turnhout, Belgium, 1992).

From pictograms to pinyin

by Rinnie Tang-Loaec and Pierre Colombel

The Chinese still use a form of writing that originated well over 3,000 years ago

RINNIE TANG-LOAEC,
of France, was formerly an ethnologist at the Musée de l'Homme in Paris. She is co-author (with Léo Landsman) of *Le mouvement qui apaise*, a book about Chinese boxing (Epi, Paris, 1984).

PIERRE COLOMBEL,
a French specialist in cave paintings with his country's National Centre for Scientific Research (CNRS), is attached to the Musée de l'Homme in Paris.

A very old tradition has it that writing consists of more or less figurative signs which represent beings and objects or evoke natural phenomena.

A popular legend tells how Fu-Hsi, who introduced laws to China and is regarded as the mythical inventor of Chinese writing, drew inspiration from the claw marks left by birds in the snow.

A more sophisticated version of the same legend is to be found in a text dating from the T'ang dynasty (618-907) in which the author recounts that Fu-Hsi had four eyes so that he could watch the earth and sky simultaneously. Observation of the Kui constellation in the sky and of the marks of birds and tortoises on the earth inspired him to develop writing.

From the early days of Chinese writing, different types of signs appeared and went on to evolve and become the "keys" to the system. The basic elements which lie at the origin of this script are iconic. The most ancient known forms are human figures painted or engraved on rock faces, for instance in the rock art sites in the Yinshan Mountains of inner Mongolia.

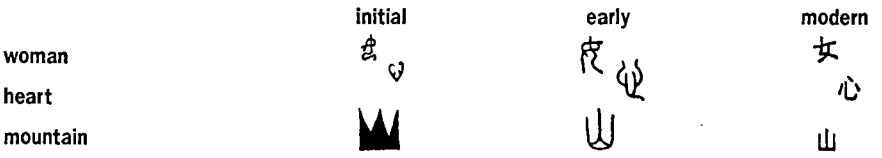
With the passage of time, these simple pictograms gradually became more stylized. From them developed ideograms, which are combinations of two or three pictographic signs depicting actions, basic ideas and more complex notions. The notion of light, for example, is a combination of signs depicting the sun and the moon.

In modern writing, characters developed out of these pictograms are few and far between,

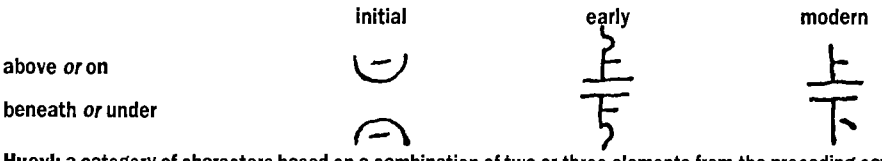
Legend has it that the mythical inventor of Chinese script took the idea from animal tracks in the snow. Facing page, tracks made by turtles in the sand.

Right, three families of Chinese characters.

Xiangxing: characters representing forms. Initially schematic, they developed by stages into conventional signs.



Zi-shi: characters representing a state, an idea or an act. The meaning of these characters is more abstract and is expressed by suggestion.



Hueyl: a category of characters based on a combination of two or three elements from the preceding categories. The character for "confidence" is a combination of the character for "man" and the character for "word". The character for "autumn", the season when straw turns golden in the fields, is composed of the characters for "cereal straw" and "fire". The same autumn sign placed above a heart means "sadness".

but they constitute the "radicals" or "keys" forming the basis for the classification of characters in dictionaries which was to remain in use until the creation in the 1950s of the *pinyin* system for the phonetic transcription of Chinese characters into the Roman alphabet.

The appearance of a Chinese script enabling texts to be written dates back to the transitional period between the Hsia (twenty-second to eighteenth centuries B.C.) and Shang (eighteenth to eleventh centuries B.C.) dynasties. This was the time when a hierarchy became established in Chinese society and the power of the state was solidly based.

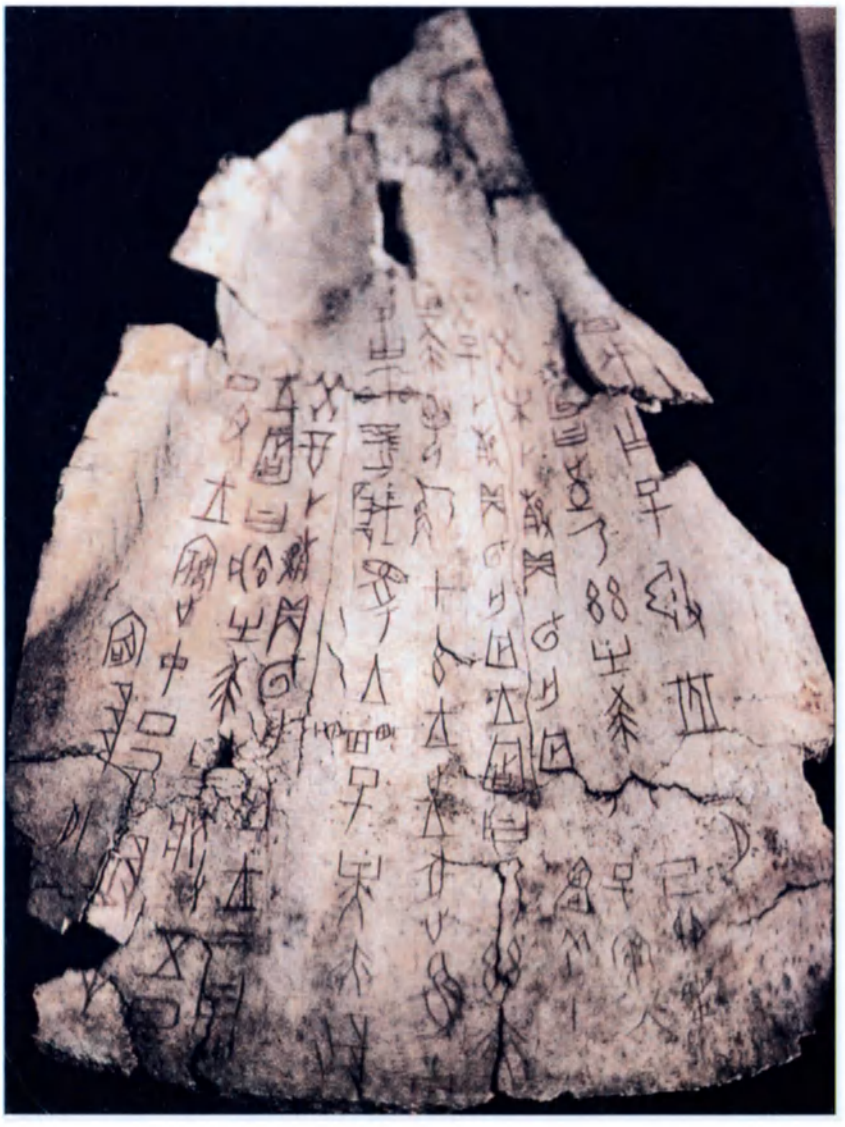
Natural selection

Archaeological discoveries have so far enabled an inventory to be compiled of some 4,000 characters engraved on more than 10,000 pieces of material—tortoise shells and flat bones that were used both for divinatory purposes and also to record events or draw up inventories. These ancient characters retrace the genesis and evolution of Chinese writing. More than a thousand of them have so far been identified. They are in a sense "stenographic drawings" which are schematized and obey a strict rule: a word and its expression correspond to each character.

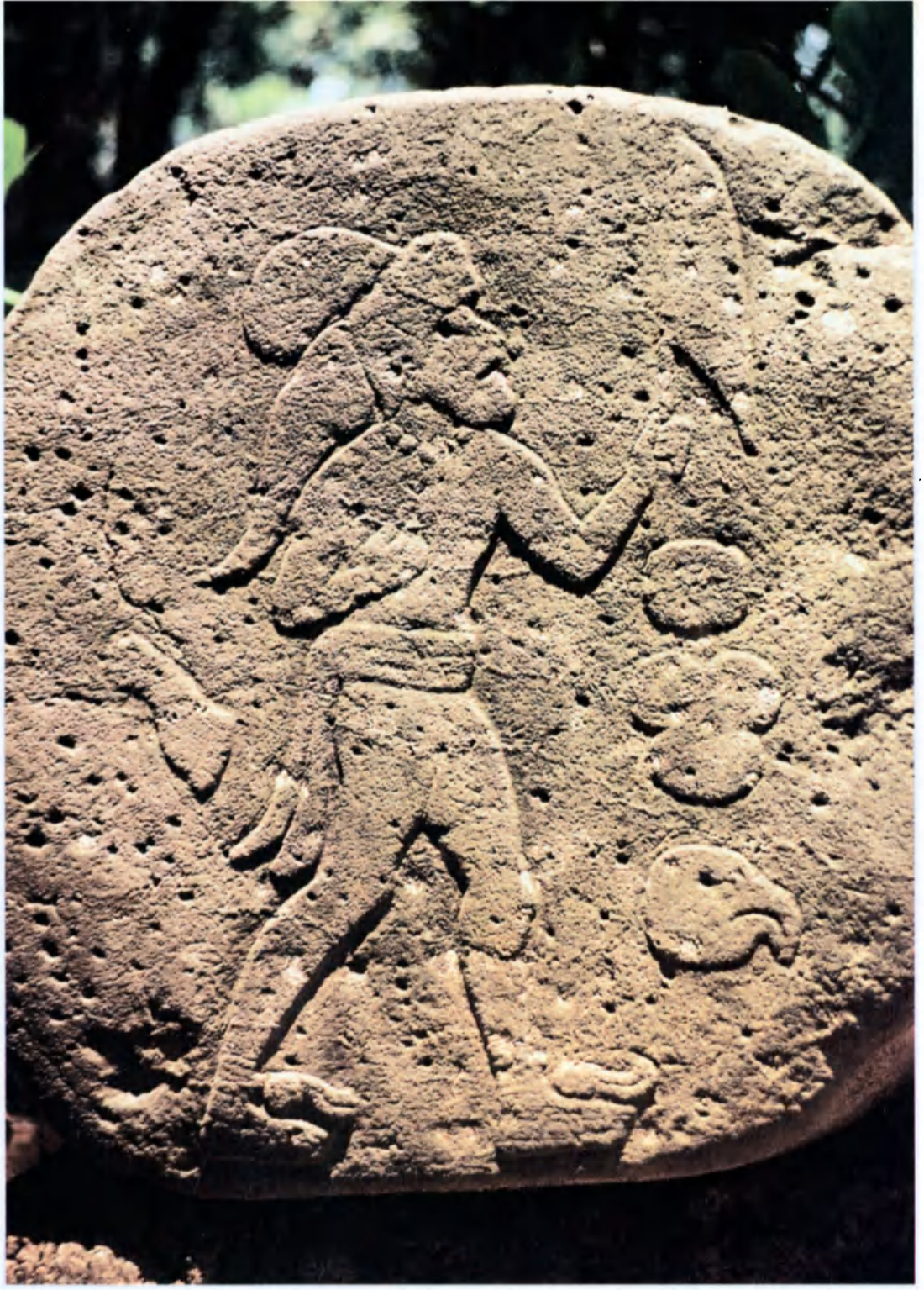
In the Shang period, this type of writing, which was the outcome of a long period during which the characters had changed, was already in current use, but not all the characters created in this way were in fact retained. Some which were difficult to communicate, had little significance or were hard to memorize, were destined to disappear. Others on the contrary which more effectively evoked specific concepts and were more widely accessible, became the first elements of a script used by a people who shared the same cultural background.

Chinese writing thus consisted originally of simple, stylized forms (pictograms) or combinations of pictograms which evoked an action or a concept. It might be said that, at its birth, this writing was created independently of the language and that the equivalence which exists today with the spoken word is the outcome of a long process of natural evolution. ■

These divinatory inscriptions on bone are among the earliest known traces of Chinese writing (16th-11th centuries B.C.)



In pre-Columbian America the Maya, the Toltecs and the Aztecs developed largely figurative writing systems in which colours played an important role



Colour-coded languages

by Joaquín Galarza

Above, the "Ambassador's stela" (c. 1500 B.C.) at the Olmec site at La Venta in Mexico. The glyphs inscribed on it are among the oldest script signs found in Central America.

Writing has been practised in Central America since very early times. A wide variety of symbols appeared as early as the Olmec period, long before the Christian era. Some of them continued to be used unchanged in the later Teotihuacan, Mixtec, Maya, Zapotec and Aztec civilizations, and are found in even more recent manuscripts dating from the sixteenth-eighteenth centuries.

Incised, painted, or carved in relief on stone or wood, writing covered the walls of civil and religious buildings and monuments. The reader had to walk around in order to read the texts, which were mainly concerned with events

related to astronomical observations or marked the beginning or end of governments. Figures and dates were abundant.

The first moveable supports used for writing were probably animal hides (mainly deerskins). Jadeite masks and figurines sent as offerings to distant temples bore short, probably religious texts, explaining where the objects were from. Longer and more complex texts on mythical, historical and religious subjects were written on ceramic receptacles.

Much later on, when cotton was grown, spun and woven, cartographical and genealogical information was recorded on large pieces of cloth.

In earlier times the bark of the wild fig tree, the *amatl*, was used to make long strips of "paper" on which illustrated texts were inscribed. Leaves of paper and hides could be kept rolled up in scrolls, or else folded and protected between two pieces of wood to form codices (singular *codex*), the name given to the European manuscript books which they resembled.

Pictograms drawn from observation

Because they differ in appearance, it has been said there are several Central American writing systems. There is, however, a single basic system whose most original feature is its pictorial basis.

Images were fully codified in order to transcribe the basic semantic and phonetic elements of the languages of the indigenous populations, which could then be used to record and communicate their ideas and their knowledge, and also produce works of art.

The pictographic or pictorial manuscripts of Central America are like strip cartoons in which every figure counts because each element signifies a concept and refers to an object, as well as having phonetic and plastic values.

The pictograms were the result of direct observation. They showed plants, animals, manufactured objects and parts of the human body with various degrees of stylization, sometimes in completely abstract form.

There was nothing gratuitous or purely decorative about these drawings, which should be read as a totality. They originally formed part of a common plastic convention, although the image changes in response to the linguistic needs of each group.

The spatial distribution of the signs also varies from one civilization to another. The Maya, for example, tended to favour a linear arrangement for certain types of sign, though they also set aside horizontal or vertical areas in order to write other words continuously, particularly when they were recording calculations or presenting a chronology of events.

However, the first word signs were drawn inside cartouches in which figurative elements can be seen. In Central American images the largest drawings seem distinct from the others. Space in general seems to be divided into two: glyphic for small images and iconic for larger ones. Mixtec and Aztec documents depict "landscapes" and "scenes" in which different themes are superimposed and information is presented step by step.

Glyphs and icons are combined and associated in the pictorial area. There are always some guidelines to indicate the direction in which the manuscript is to be read. The script is a mixture of logography and iconography.

It is only in documents with a highly specific purpose, such as calendars, chronicles or

Detail from an Aztec ritual calendar or "book of destiny" dating from the time of the conquistadors (15th-16th centuries). Painted on paper made from bark, the calendar was dedicated to Petecatl, the god of pulque (fermented agave juice) symbolized by the pot at his feet. In front of the god are two warriors, an eagle and a jaguar.

Essentially, there is a single system with a pictorial basis. Images were codified to allow the indigenous populations to record and communicate their ideas, and also produce works of art.

Left, a mural painted by the contemporary Mexican artist Desiderio Xochitiotzin for the government offices at Tlaxcala, capital of the Mexican state of the same name. It shows a group of Tlaxcalans looking at a codex around the time when America was "discovered" by Christopher Columbus.

Above, a Maya manuscript (15th-16th centuries). Glyphs and drawings are painted on a strip of paper made from fibres of the *amatl* (wild fig) tree. The manuscript is several metres long and folds like an accordeon.

economic lists that the different "texts" can be distinguished one from another.

The Aztec model

Tlacuiloa, the term used in Nahuatl, the language of the Aztecs, to designate the traditional writing system means "to write while painting" or else "to paint while writing"—writing and painting being in this case the same activity.

Although research into the decoding of the Aztec notation is still in its infancy, we can be sure that it is a dual system of drawings (glyphs and icons) originating from the same plastic convention and based on the sounds of Nahuatl.

Codification of images is thus primarily by sound: shapes defined by a black outline form surfaces designed to contain colours. These symbols transcribe the basic phonetic elements (syllables) and semantic elements of the Nahuatl language.

Words, sentences and paragraphs are constructed using combinations of these elements. The plastic and phonic composition created by the *tlacuilo* ("writer-painter") results in "picture-texts" where the order and direction for reading the shapes and colours are indicated by the artist within the drawing itself.

Colours are basic components of the Central American pictographic system, unlike other such systems. They are pronounced (each one has a phonetic value) and the syllables of their names are combined with those of other elements, including their own receptacle-shapes. This in no way diminishes their representative value.

These codices or "picture-texts" must first of all be read in the Nahuatl language before being interpreted. To do this, the reader must know, in addition to the language, the code governing shapes, surfaces and colours in the Aztec system of representation. ■

JOAQUÍN GALARZA,
of Mexico, is a research director at France's National Centre for Scientific Research (CNRS) and is attached to the ethnology laboratory of the Musée de l'Homme. Among his published works is a study on traditional Aztec writing in Nahuatl (Mexico City, 1988).

The calligrapher's art

by Hassan Massoudy

Calligraphy reached a high degree of perfection in the Islamic world, where representational art was spurned and Arabic script offered rich possibilities for creative fantasy

Above, a composition by the calligrapher Mustafa Rakim. Executed in 1797, it is now in the Topkapi Museum, Istanbul.

Oral tradition was paramount among the Arabs in pre-Islamic days, and poets were the memory of their tribe. Then the Arabs felt the need to write down their stories, first simply as an *aide-mémoire,* using only a few signs. With the advent of Islam in the seventh century A.D. writing began to be important because it gave visual form to the word of God. The Qur'an, the first book written in Arabic, played a key role in its development and the evolution of calligraphy.

Precise practices were laid down. The writing instrument was the calamus, a sharpened reed still used by calligraphers. The method of sharpening it was most important, for it varied with different scripts. The ink was prepared with meticulous care and (like the calamus) in strict secrecy.

The teaching of writing was the responsibility of a master, who began by drawing letters in the sand with his finger. The pupils imitated him, then rubbed it all out and started afresh.

"Don't use two words if one will do", says the Arab proverb here written by calligrapher Hassan Massoudy in 11 different styles: Diwani, Farsi, Roqaa, Nashki, Thoulti, Ijaza, Maghribi, book Kufic, foliate Kufic, plaited Kufic and geometric Kufic.

Later, smooth wooden tablets coated with clay were used. Each pupil drew a few lines, and then had to keep them until he knew them by heart.

At the end of the seventh century, Arabic and its script became official, and were adopted in the administration of all Muslim countries. The script evolved into two main forms, a rounded flowing one called *nashki* and a stiff angular one called *kufi*. These two styles gave rise to a multitude of others, nearly all named after their place of origin (thus *hiri* from the town of Hira, *hijazi* from the Hijaz area, etc.).

In the eighth century the Arabs learned the secret of paper-making from the Chinese, and this encouraged the spread of written texts and fostered the growth of writing. Every corner of the far-flung Muslim empire had its own style, reflecting its culture and tastes. Thus while the *kufi* script was the one mainly used for writing the Qur'an, it did not have the same appearance in India as in Iraq, nor the same in Egypt as in Andalusia.

Monumental lettering (painted on enamel, or carved in wood or stone) became even more different, gradually diverging from handwriting until it lost its original structure. One of the earliest inscriptions is the one inside the Dome of the Rock at Jerusalem, in which gilded Kufic characters on a blue ground run along the mosaic walls: this dates from the seventh century. Later there was a proliferation of calligraphy on all religious and secular monuments.

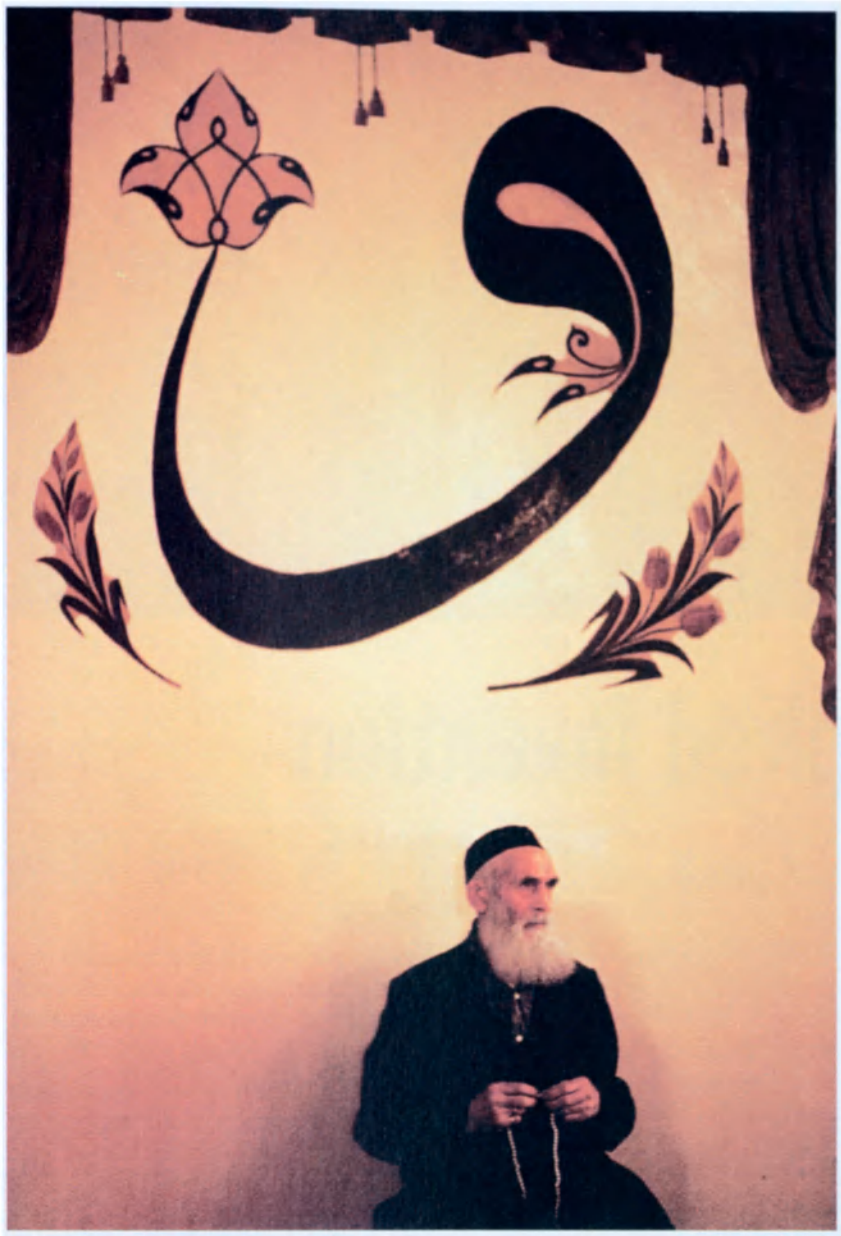
Kufic script was originally thick and heavy: when it turned into an architectural feature it became refined and monumental. The characters became taller and thinner, suggesting a townscape with domes and minarets, or else formed plaited, floral or geometrical designs. Quadrangular Kufic, for example, consists entirely of lines meeting at right angles, which gives it austerity and strength. The written words are simplified in form; the letters no longer follow one another on a line, but float in space as though weightless, or are intertwined in a spiralling diagonal along the rounded stem of the minarets.

An abstract art form

Script, omnipresent not only on monuments but also on clothing, crockery and furniture, was the premier visual art form of the Islamic city—representations of "beings with souls" having fallen into disrepute. Writing became the main decorative feature of mosques, palaces and schools. The only exception was scientific and literary books, but even there representations of the human figure lacked realism, relief and depth. Thus it was calligraphers who borrowed from the vocabulary of artists and used words to give the illusion of illustration. According to their inspiration and personal taste they enriched their texts with new meanings, as in the so-called "mirror calligraphy" conveying mystical fervour.

On monuments, calligraphy became an object of meditation. Complicated geometrical constructions known as calligrams became illegible, or contrariwise simplified to the extreme, like the enormous single letter *waw* on the wall of the Great Mosque at Bursa, in Turkey. Calligraphy thus became an abstract art form, expressing the feelings of the calligrapher which the observer could interpret as he wished. It developed in two main directions. First, the shape of the letters themselves—sloping up, sloping down or lying down—required calligraphers to be extremely meticulous. The shape varied according to whether the letter was at the beginning, in the middle or at the end of the

Young pupils at a Qur'anic school in Andkhoy, Turkestan (Afghanistan).



A huge calligraphic version of the letter *waw* drawn on a wall of the Great Mosque at Bursa in Turkey.

The shape of the letters—sloping up, sloping down or lying down—required calligraphers to be extremely meticulous. The shape varied according to whether the letter was at the beginning, in the middle or at the end of the word. Letters were nearly always joined up; and the space they had to fit into needed to be carefully measured.

word. Letters were nearly always joined up; and the space they had to fit into needed to be carefully measured.

The second line of development was the calligrapher's own imagination. The accepted rules did not exclude innovation. After spending years studying the legacy of his forebears, an artist eventually gave his inspiration free rein; and it was by breaking the rules that he advanced his art. The calligrapher Ibrahim al-Suli said in the tenth century: "When the pen becomes a tyrant, it binds together that which was separate and separates that which was bound together."

An alphabet used by thirty-odd languages

As early as the reign of the Abbasid caliph al-Ma'mun (786-833), competition between calligraphers had given rise to dozens of specialized styles. There was one reserved for the caliph, one for ministers, and yet another for messages to princes. There was a style for poetry, one for treaties and contracts, one for finance, one for defence and so on. It was a prosperous time for the profession of calligrapher, which according to Ibn al-Habib al-Halabi had become "the noblest office, the best branch of knowledge and the most profitable estate" of the period.

Each caliph had his accredited calligrapher, a confidential adviser to whom he sometimes even entrusted the management of his household. One calligrapher, Ibn Muqla (b. 886) even became a minister: it was he who, considering Kufic too heavy for a period as refined as his, invented a more flowing, rounded script (*nashki*), and gave it a geometrical shape to make it worthy of transcribing the Qur'an.

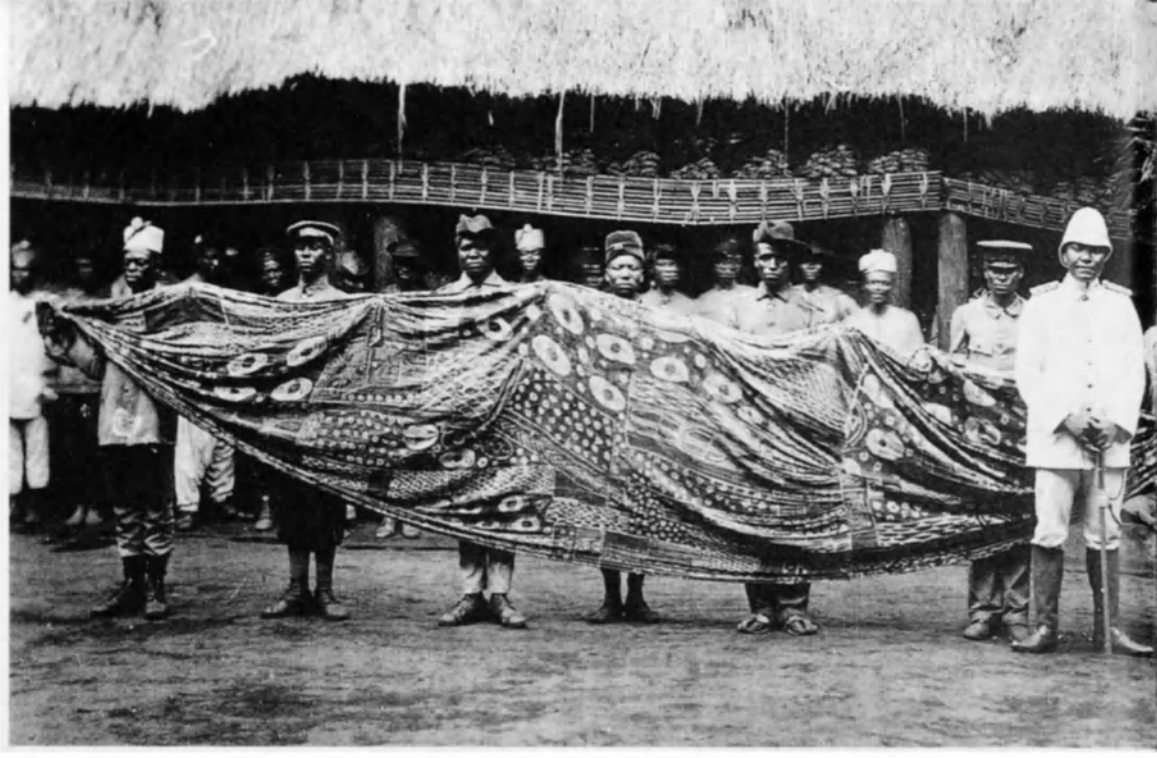
Ibn Muqla's reforms were not followed in the western Arab world. From Egypt to Andalusia, North African calligraphers, with their more austere artistic traditions, refused to give up Kufic, including the Maghribi script and the many variants derived from it.

Thereafter there were two main schools of calligraphy, that of Ibn al-Bawwab (eleventh century), who improved on Ibn Muqla's procedures, and that of al-Musta'simi (thirteenth century), who improved the calamus by cutting its nib obliquely, thus giving finer upstrokes.

Some thirty languages have used the Arabic alphabet. The Iranians created their own style, and improved many others. The Ottomans were the last great masters of the art of calligraphy. Their empire saw the introduction of the *ijaza*, a qualification which entitled the holder to teach calligraphy. It produced some great calligraphers, such as Shaikh al-Amassi in the sixteenth century, who adapted the various scripts for writing Ottoman Turkish, and Hafiz Uthman (seventeenth century), who brought simplicity, purity and grace to calligraphy.

Nowadays, with the development of television and modern methods of reproduction, contemporary calligraphy has lost part of its *raison d'être*. But it still remains on the look-out for a new way forward, in order to advance the art of writing. ■

HASSAN MASSOUDY, an Iraqi-born calligrapher, is the author of several works, including *La calligraphie arabe vivante* ("Living Arabic Calligraphy", Flammarion, Paris, 1981 and 1986) and *Calligraphie pour débutants* ("Calligraphy for Beginners", EDIFRA/IMA, Paris, 1990).



Sultan Njoya of Foumban poses in western military uniform in front of a royal costume displayed by his chamberlain (1908).

An inspired invention

by David Dalby

Egyptian hieroglyphics may have drawn inspiration from older African traditions

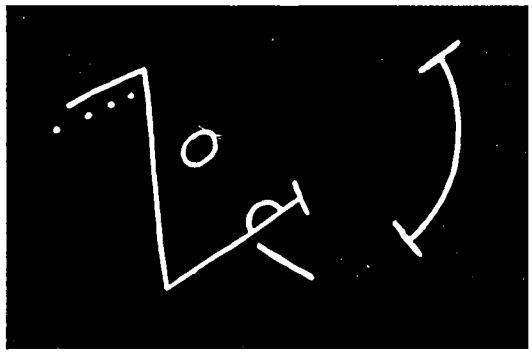
Whereas the writing revolution—the linear, visual representation of specific spoken languages—began only 5,000 years ago, the use of graphic symbols to represent objects and ideas, and to encapsulate magical and religious values, is almost certainly as old as articulate speech itself.

It has sometimes been suggested that certain traditional African symbols, such as those used among the Akan-speaking peoples of Ghana, were inspired by Ancient Egyptian hieroglyphs, by that magnificent explosion of human writing which took place in northeast Africa. It is more probable, however, that the hieroglyphs themselves drew an important part of their inspiration, 5,000 years ago, from even older traditions of graphic symbolism in Africa itself.

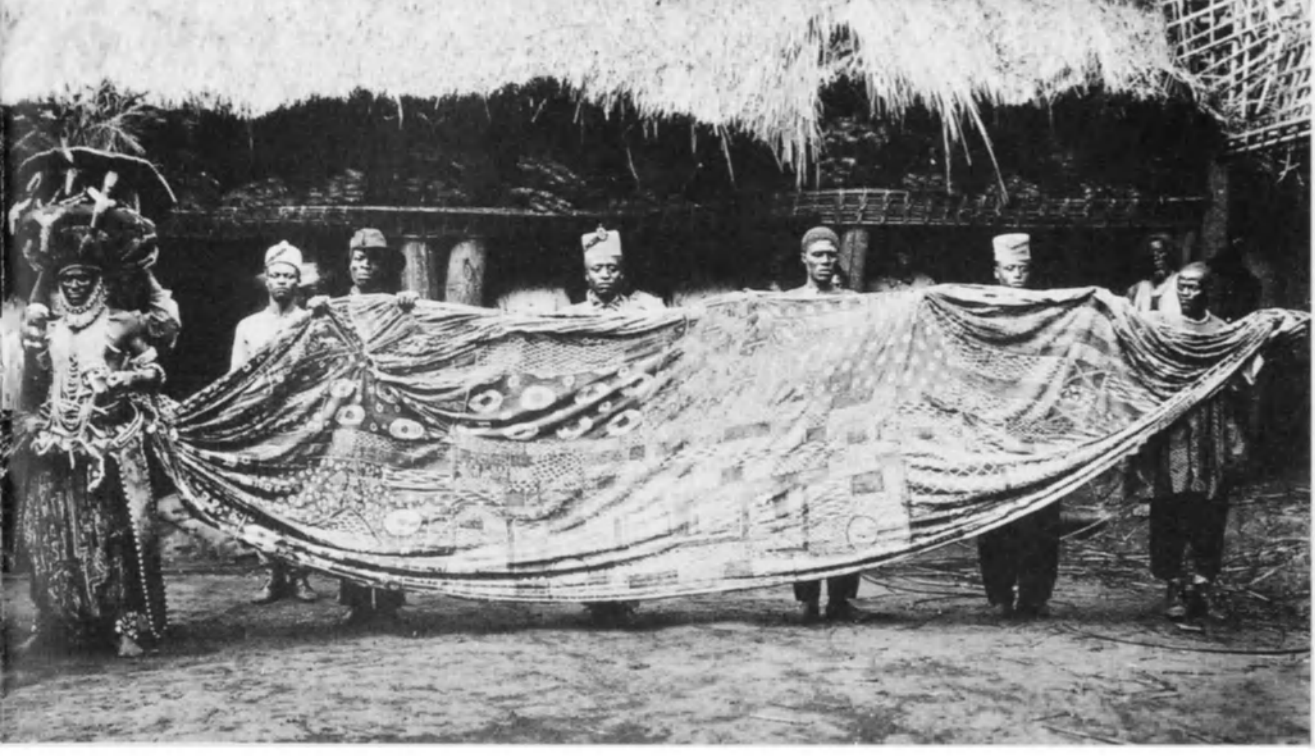
Whereas a long tradition of writing seems to have existed northwards and eastwards of the Sahara and the Nile Valley, southwards stretches an area whose cultures are associated primarily with oral tradition. On the other hand, especially in West Africa, there are strong traditions of graphic symbolism and also many examples of the modern evolution or design of "new" indigenous systems of writing.

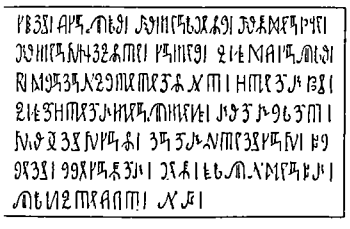
One of the most remarkable examples of the use of graphic symbols in Africa is the complex system of pictograms and ideograms known as *Nsibidi* (or *Nsibiri*), used traditionally in the Cross River area of southeast Nigeria. The system is known to have many usages, including the use of symbols in combination to record narratives, especially the evidence recorded in contentious love-affairs. Nsibidi symbols may be engraved on calabashes and other domestic objects, painted on walls, printed on cloth or tattooed or painted on the human body. They are not associated with any one specific language but are found in a multilingual area among speakers of Ekoi, Igbo and Ibibio.

A curious tradition relates that the secrets of Nsibidi were long ago revealed to men by a species of large baboon called *idiok*. This legend is above all reminiscent of the divine baboon associated with Thoth, the patron of scribes in ancient Egypt. These widely separated beliefs about the same animal are unlikely to be pure coincidence, and we are left with two other possibilities. Was this a specifically Egyptian belief which found its way over thousands of years and thousands of kilometres to eastern Nigeria, or was it perhaps an ancient and widely spread belief in Black Africa which passed to Egypt



DAVID DALBY,
of the United Kingdom, is a former director of the International African Institute and emeritus reader in African languages at the University of London. He is currently director of the Observatoire Linguistique in Cressenville, France, where he is compiling a register of the world's modern languages entitled *The Key to the Logosphere*. Among his published works are *Language and History in Africa* (1970), *The Language Map of Africa* (1977) and *Africa and the Written Word* (1986).





The Lord's Prayer written in the Bamun language of Cameroon in 1911. The script is known as a-ku u-ku, a name derived from its first four characters.

with the knowledge of traditional graphic symbols, a vital element in the elaboration of early pictographic hieroglyphs?

Sultan Njoya's dream

A short distance eastward from the traditional area of Nsibidi, across the border in German Cameroon, a remarkable cultural event occurred just a century ago. This was the progressive elaboration by Sultan Njoya of Foumban of an independent and original system of writing for the Bamum language.

Like several other inventors of African writing systems, Njoya was inspired by a dream, after which he asked his subjects to draw different objects and to name them. Armed with their results, he experimented until he had created his first system of writing, containing some 466 pictographic and ideographic symbols. Forty years of experimentation and steady progress led him to the use of his final a-ku-u-ku syllabary, named after the first four of its eighty characters.

Sultan Njoya was certainly a man of genius, but it was his royal position which enabled him to see his ideas through to completion by establishing schools at which his subjects learned to read and write, elaborating a system of printing with hand-made copper dies and compiling texts on the history and customs of his kingdom.

Unfortunately Njoya's achievements were doomed by the outcome of the First World War. Encouraged under German rule, Njoya's schools were closed by the post-war colonial authorities, and he destroyed his own printing system in frustration. He was deposed in 1931 and exiled until his death two years later.

A sacred script

The history of Njoya's system raises the possibility that the form and sudden appearance of Egyptian writing may be explained in a similar way, as the invention primarily of a single man, highly enough placed to have the necessary leisure for his task and for the result to have been accepted without opposition among his own people.

There is no evidence of any long evolution of hieroglyphic writing in the beginning, and the progress of a single inventor could explain the complex structure of the Egyptian script in its earliest recorded form, where different stages of development appear already to be fused into a single system.

Just as Njoya is known to have been impressed, but in no way influenced, by the Arabic script, so an Egyptian inventor may have been stimulated by the slightly earlier invention of a quite different writing system in Mesopotamia.

As in the documented cases of several indigenous writing systems in West Africa, a claim by its inventor to divine inspiration may be assumed in the case of the Egyptian script also, and such an origin was certainly the traditional belief throughout the script's history. The sacred and revealed nature of Egyptian writing made it immune to any radical restructuring for thousands of years and limited its use to an initiated elite. ■

Facing page, the first of these two symbols represents the name "nsibidi", a system of graphic symbols used traditionally in part of southeast Nigeria. The second represents an idiok, one of the large baboons which supposedly revealed the secret of nsibidi to human beings.

This Egyptian statuette depicts Nebmertuf, priest, archivist and scribe to Amenophis III (c. 1400 B.C.), humbly sitting at the feet of Thoth, the baboon-headed god of writing.

A four-in-hand script

by Shiro Noda

The composite nature of Japanese writing is an aid to flexibility and effectiveness

The "sign of happiness" on a wooden panel.

SHIRO NODA
is a Japanese historian and linguist who is currently a lecturer in the Japanese department of France's National Institute of Oriental Languages and Civilizations in Paris. The present article has been abridged and adapted from a longer study.

Although scholars still disagree about the origins of the Japanese language, the origins of its notation system are less obscure.

The notation system currently used in Japan is a combination of four different forms: 1) *kanji* (logograms); 2) *hiragana* and 3) *katakana* (syllabograms); and 4) roman (phonograms).

It is generally agreed that Japanese writing dates back to the fifth century B.C., a period when Chinese writing was formally introduced into the country through Buddhist texts. *Kanji* word signs are derived from Chinese writing, which was then the prerogative of the intellectual class. It was used at the imperial court, by the civil service, and by Buddhist monks for reading and transcribing religious documents. It was not used by the mass of the people.

Despite its usefulness, Chinese notation had one major drawback because of the basic difference in the syntactical structure of the two languages. It had to be adapted by giving a purely Japanese reading to Chinese ideograms. A reading system was invented for this purpose. It was known as *kaeriten* (reference mark), an allusion to the point put to the left of Chinese characters to indicate the order in which they should be

read. But *kanji* was hard to apply to the language of everyday life, and a Japanese sentence written in *kanji* seemed highly unnatural.

The voice of letters

This was the linguistic situation in Japan when, at the beginning of the Heian period (late eighth and early ninth centuries), the ladies of the imperial court invented the cursive syllabary known as *hiragana,* which consisted of signs derived from Chinese characters but considerably simplified and shaped in Japanese style. This was a crucial moment in the evolution of the Japanese language, for the invention of *hiragana* was not a mere morphological transformation of Chinese characters. As an ideogram, a *kanji* character could express an idea, a concept or an image, but *hiragana* added a new dimension to Japanese writing, namely the phonetic transcription that is entirely independent of the ideographic system.

The great advantage that *hiragana* had over *kanji* was that it enabled the Japanese to write about daily life in everyday language. The invention of *hiragana* encouraged the emergence of a purely Japanese literature, of which *The Tale of Genji,* written at the beginning of the eleventh century by Murasaki Shikibu, a lady of the imperial court, is the most famous classical example.

Around the same time, towards the end of the eighth century, a third type of writing *(katakana)* was perfected by Buddhist monks in order to make it easier to read the sutras and to encourage the spread of Buddhism among the peasantry. *Katakana* follows the same principle of simplifying Chinese characters according to their phonetic value. Today *katakana* is used above all to transcribe borrowings from other languages.

A portrait of the Japanese calligrapher Tofu Ono, thought to be by the 12th-century painter Raiju.

A calligraphy competition for schools is held annually in Tokyo on New Year's day.

Simplexity

It might be wondered why the Japanese have not adopted one or another of the writing systems (*hiragana, katakana* or roman), which would make learning Japanese much easier, rather than sticking to this combination of the four. The answer is quite simple. The phonetic representation systems of Japanese call for a linear approach that slows down the reading process and correspondingly delays understanding of the content, whereas the globality of the logogram means that it can be immediately recognized and understood once it has been memorized. Paradoxically then, the consequence of using four integrated kinds of writing is that the effectiveness and flexibility of Japanese writing is increased. The complexity of the system is actually a simplifying factor. ■

The power of the pen

by Henri-Jean Martin

The written word has always been closely associated with power. But literacy is a stepping stone to intellectual freedom as well as an instrument of authority, and has been a factor in the great revolutions of world history.

We may never know what led up to the appearance of writing at different times and in different places. In the Far East, the earliest known examples were intended to facilitate communication with the gods, whereas in the Middle East their main purpose was the keeping of accounts. At a later stage, writing was used to record customary law and traditional tales for posterity, while as a result of its use for commercial purposes in the Middle East it was gradually simplified, finally giving rise to alphabetical systems.

A monk-copyist is shown in this detail of an illuminated manuscript dating from 1370 that once belonged to the library of the emperor Charles V.

In parallel with these developments, society conferred extraordinary power on those who could write. In some parts of the world, writing remained the preserve of the priesthood, while in others, as in ancient Gaul, the priests refused to set down the secrets of their religion in writing. As a general rule, it long remained the speciality of scribes, a situation found in places as far apart as Mesopotamia, Egypt and China.

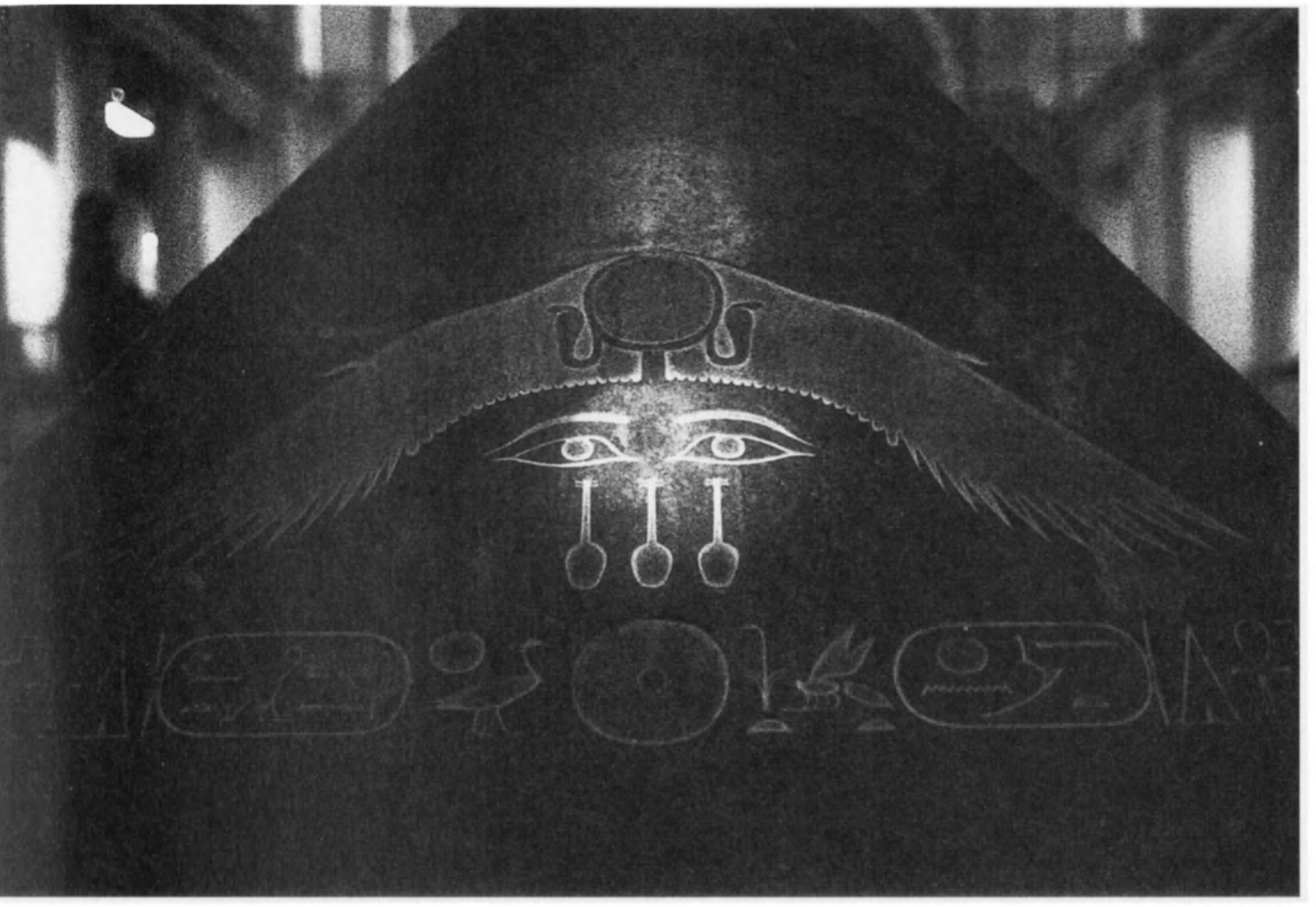
A passport to power

Having control over society's collective memory and having been put in charge of drawing up its laws, scribes established themselves as counsellors to the high and mighty and as judges with authority over their fellow men, often creaming off their share of the wealth they assessed and the taxes they gathered. In such circumstances, the Romans, tired of being judged and governed according to rules of which they were ignorant, when they had learned to read and write demanded that the laws be displayed on wooden boards in the Capitol.

At the time of the barbarian invasions of western Europe, written culture took refuge in the monasteries, which were anxious to preserve the sacred and liturgical texts. Much later, after Europe had been reshaped, writing emerged once more in the re-established towns, and the feudal warlords who had imposed their power were obliged to call upon the help of clerks, specialists in the written word who carved out for themselves a privileged place in the young states of western Europe.

At the courts of the Renaissance princes, the privy counsellor or secretary played a prominent role, and most of the humanists were drawn from the papal, Florentine or other chancelleries, from among the learned men who were responsible for the drafting of diplomatic, legislative, legal or administrative documents.

In France, for example, such men who had bought their way into office created a new social category, giving rise to the *noblesse de robe* which tried, not unsuccessfully, to claim for itself the greater part of the power and wealth of the state.



In pharaonic Egypt, hieroglyphic writing ("the word of the gods"), covered temple walls and tombs, statues, funerary objects and items used in everyday life. The beautifully stylized drawings were meant to be seen as well as read. Above, a pyramidion in the Cairo museum.

HENRI-JEAN MARTIN, a French archivist and palaeographer, is director of studies at the Ecole Pratique des Hautes études and emeritus professor at the École Nationale des Chartes, both in Paris. He is the author of a number of award-winning studies on the history and sociology of books.

The law of the letter

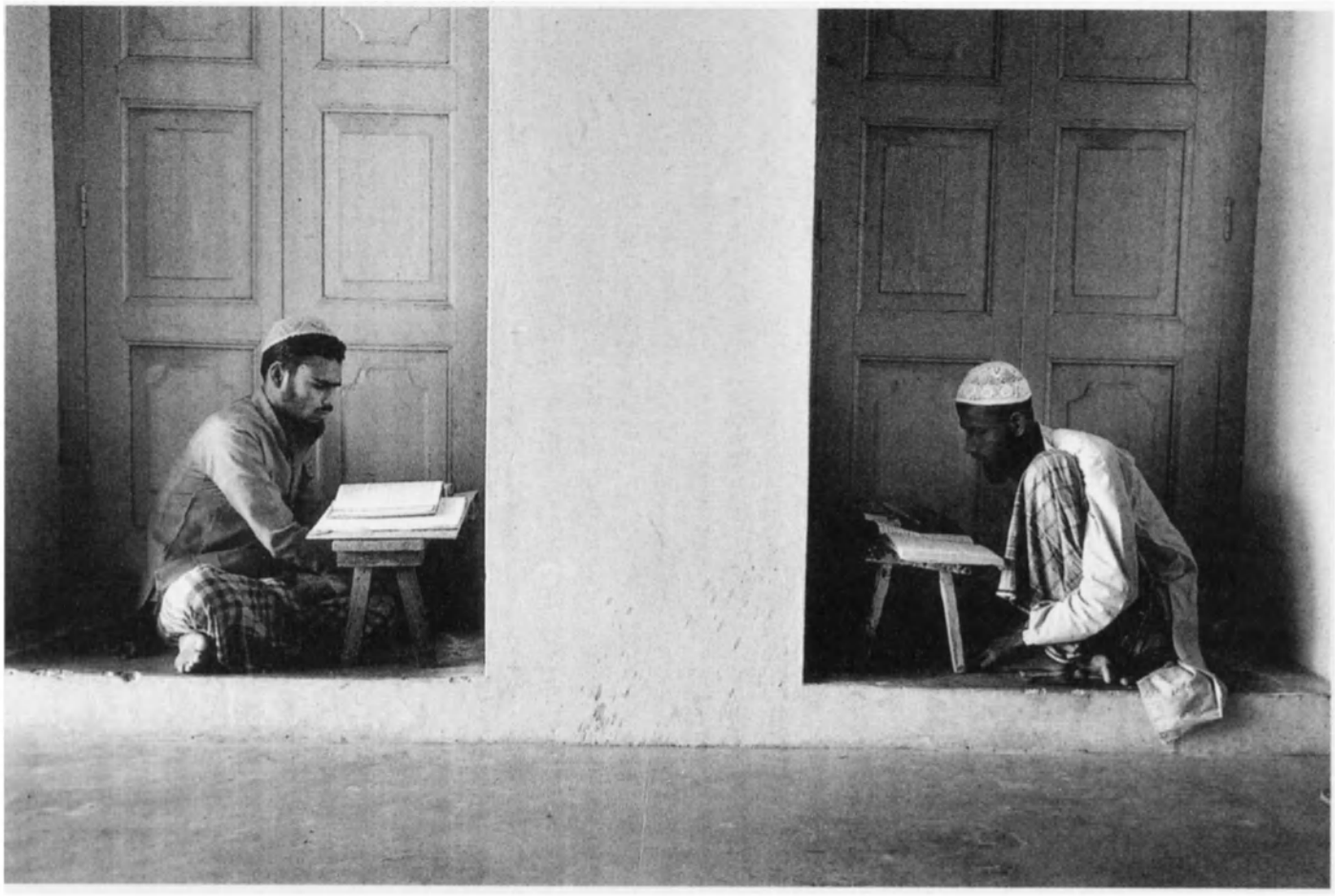
Writing thus became an instrument of government, and hence of power, wielded by experts. Simultaneously it imposed its own rationale on the peoples that used it. By providing a stable record of custom, it had the effect, over time, of preventing custom from developing spontaneously as a product of the collective consciousness, as the oral tradition allowed it to do. It thus gradually subjected society to the dominance of the law. The law, for its part, had an author and a date, and was by definition written, but it was shackled by its written form and inevitably, with the passage of time, lost touch with society's changing requirements, leading to continual problems of interpretation.

Such developments were not, however, constant or inevitable. Systems of writing are still in use today that maintain a more flexible relationship with the spoken language, systems that are the product of a combination of factors—the structure of the language, the innate character of each people and the influences to which it has been subjected throughout its history. Furthermore, in the West at least, the presentation of documents has evolved constantly, in keeping with changes in society and with society's complex relationship with the spoken and written word.

The scrolls on which Cicero's speeches were copied down, for instance, contained a continuous text without spaces between words or paragraphs; they were meant to be read aloud and understood by being heard. It was not until the eleventh century that copyists got into the habit of systematically separating words. The thirteenth-century *Summa Theologiae* of St Thomas Aquinas consists of dense pages, bristling with abbreviations and with lots of coloured signs appearing at intervals; set out in the form of an oral disputation, it is divided into articles proceeding from the particular to the general in accordance with a stereotyped pattern intended to keep the reasoning on the rails.

Later, with the invention of printing, the paragraph as we now know it gradually came into general use, with the spaces that give the eye and the mind a rest, helping the reader to digest what has just been read. It is surely no coincidence that Descartes' *Discours de la méthode* (1637) was the first work of philosophy in French to be set out in the modern style.

Because of these ways of presenting material in print, the spoken language and the written text—the latter now intended to be read and not spoken or heard—have, in the West, gradu-



An Islamic school in Dar el-Ulum in Deoband, near Uttar Pradesh (India).

ally drifted further and further apart. This development may have contributed to the comeback made by the image since the nineteenth century and the upsurge in increasingly hard-hitting advertising. The trend has now affected newspapers, which, to improve their circulation, have been induced to adopt an attention-grabbing layout intended to convey the greatest possible amount of information and emotion in the shortest possible time.

Divide and rule

To understand the problems arising at the receiving end of the writing process, we should begin by discarding the widespread belief that some types of writing are more functional than others. It is now generally acknowledged that literacy above all answers a need for decompartmentalization, for communication with the outside world. The understanding of a text is not a simple matter of technique: it also requires readers to possess the necessary mental equipment, a stock of concepts that will enable them to establish a personal dialogue with the text.

One of the main effects of the emergence of writing was to divide people into categories, according to their capacities to master the written word. Generally speaking, it soon became necessary, in most societies, to be able at least to read, if not to write, so as to be able to decipher and learn the canonical texts or holy scriptures. The religious or civil authorities deemed it necessary above all to teach the rudiments of reading, i.e. a form of passive access to the written word.

In Europe, for instance, children were first taught to recognize letters and spell out Latin prayers, writing being held over for a later and often optional stage. The effect of this method, applied mainly to girls (who, as a character in one of Molière's plays says, should not learn to write lest they should correspond with their lovers), was to produce social categories of semi-literates, who could often get to know texts only by reading together in groups. For similar reasons, it apparently was long-standing practice to read aloud or in an undertone, particularly in the case of women reading novels. Only those who belonged to the ruling classes and who had pursued lengthy studies in colleges or universities were actually able to read silently to themselves.

In control of society's collective memory and responsible for drawing up its laws, the masters of the written word established themselves as counsellors to the mighty and as judges of their fellow men.

Thus Western societies remained for a long time only very incompletely literate; some people have claimed, no doubt with some slight exaggeration, that the great revolutions occurred when more than half the population became literate. It should also be borne in mind that, throughout history, there was never a watertight partition between written culture and oral tradition. The great mass movements, such as the heresies of the Middle Ages, the Reformation in the sixteenth century, and the revolutions—in England in the seventeenth century, France at the end of the eighteenth and Russia at the beginning of the twentieth—were inspired by images, songs and the spoken word as much as by writing.

People in the Middle Ages learned their religion from the paintings on church walls. Even today, we need only think of the place occupied, in some parts of the world, by open-air preaching or even soap-box oratory; of topical songs and the stories told in the workplace or by the fireside; of the many contacts between literates and "educated" people, or of the role that the self-taught so often play as intermediaries. It was through all these channels that the theories of such as Voltaire or Rousseau reached the revolutionary masses, who blithely claimed to have been inspired by these thinkers without having read their works.

Lastly, in the course of the last hundred years, the new communications media have brought recorded speech and the moving image to the fore; but the effect of these technologies, unlike that of reading, is to highlight emotion and propaganda over a logical approach and individual reflection.

The long evolution of writing in the West, from the invention of the first pictograms or ideograms to the full transcription of speech through phonetic signs, has run parallel with the development of a logical, analytical spirit that gives preference, over the transience of the spoken word, to the written text, with all it implies of stability or even fixity. While it is an instrument of authority, writing thus also has a power to liberate the mind that, by the same token, makes it an instrument of liberation from that authority. ■

A peasants' university in Leningrad in 1918.

One of the main effects of the emergence of writing was to divide people into categories, according to their capacities to master the written word.

At a school in Antecume Pata, French Guyana, young people learn to read and write in their mother tongue, Wayana, before continuing their schooling in French.

FROM IMAGE TO ALPHABET

c. 35,000 B.C.: *Homo sapiens* begins to create images and use language.

c. 30,000 B.C.: cave paintings in Europe.

c. 15,000 B.C.: the Lascaux and Altamira cave paintings.

c. 3300 B.C.: pictographic writing appears in Mesopotamia.

c. 3100 B.C.: the earliest Egyptian hieroglyphics.

c. 2800-2600 B.C.: Sumerian writing becomes cuneiform (wedge-shaped).

c. 2500 B.C.: cuneiform begins to spread through the Near East.

c. 2300 B.C.: the peoples of the Indus Valley use a form of writing that has not yet been deciphered.

c. 1500 B.C.: Chinese ideographic writing on bronze vases and oracle bones.

c. 1400 B.C.: Ugarit merchants use a Semitic cuneiform consonantal alphabet.

c. 1100 B.C.: first known inscriptions in the Phoenician linear alphabet.

c. 1000 B.C.: Aramaic writing appears; a derivative of Phoenician, it is an ancestor of Arabic script and Indian Sanskrit writing.

c. 900 B.C.: the Phoenician consonantal alphabet spreads around the Mediterranean basin.

c. 800 B.C.: the Greeks create the modern alphabet with vowels.

c. 600 B.C.: first Latin epigraphic inscriptions in capital letters.

c. 400 B.C.: papyrus arrives in Greece; handwritten documents.

c. 90 A.D.: the codex (earliest form of the book) replaces the scroll, and parchment replaces papyrus in the Roman Empire.

c. 105: paper invented in China.

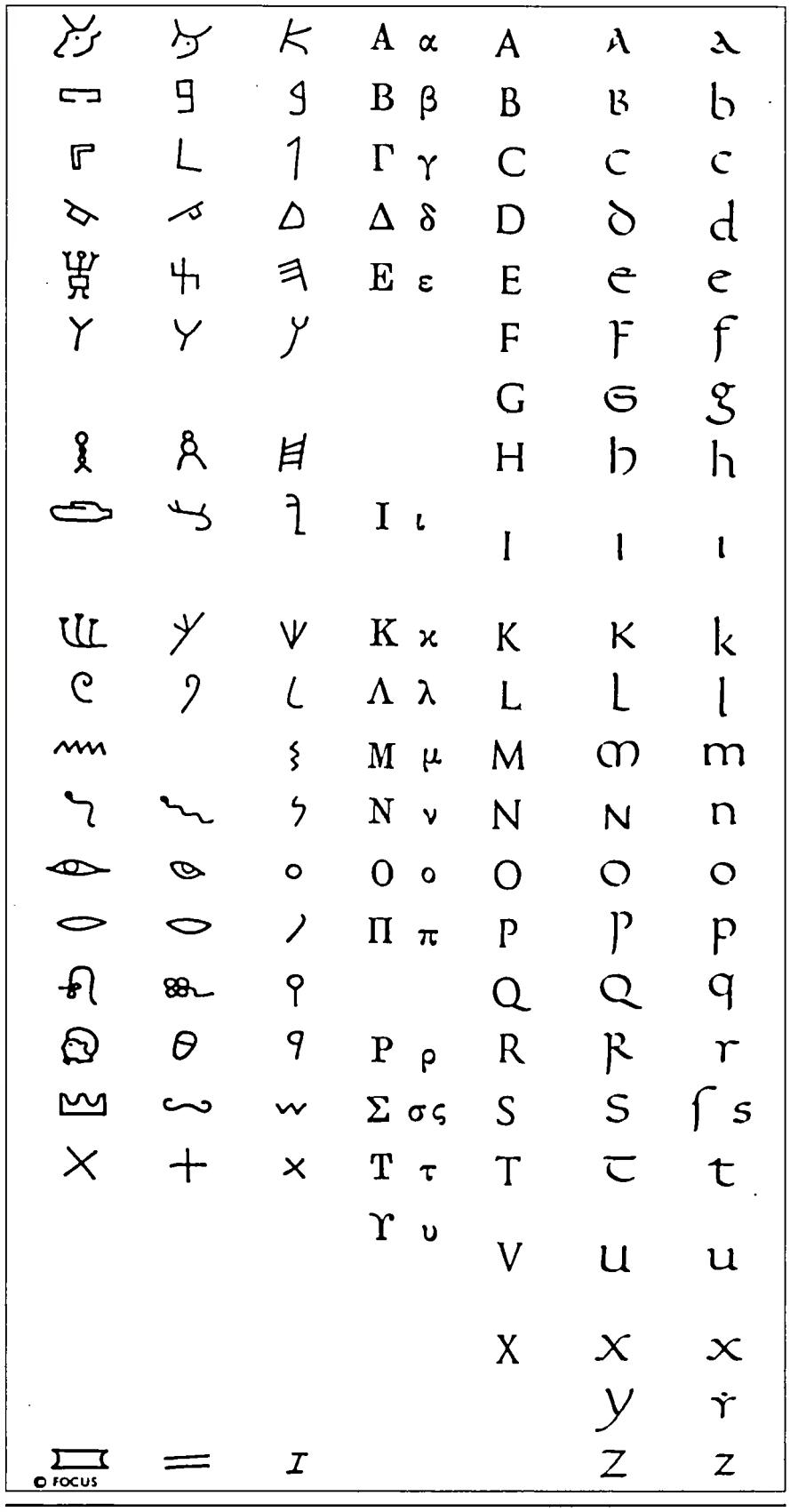
3rd century: beginnings of Maya writing.

7th century: the printing press invented in China. Arabic writing appears.

15th century: Gutenberg invents printing in Europe.

Sources: *Naissance de l'écriture*, Réunion des Musées Nationaux, Paris, 1994, and B. Fraenkel, Centre d'Étude de l'Écriture, Paris

F A C T



Source: *Nouvelle Encyclopédie Bordas*, © SGED, 1988

FURTHER INFORMATION

Forgotten Scripts: their ongoing discovery and decipherment
(revised and enlarged edition),
by Cyrus H. Gordon. New York, Dorset Press, 1987, 226 pp.

Voices in Stone: the decipherment of ancient scripts and writings
by Ernst Doblhofer (trans. Mervyn Savill). Bungay, Suffolk, U.K., Souvenir Press, 1961, 327 pp.

Writing Systems: a linguistic introduction
by Geoffrey Sampson. Stanford, California, Stanford University Press, 1985, 234 pp.

Writing: the story of alphabets and scripts
by Georges Jean (trans. Jenny Oates). London, New Horizons collection, Thames & Hudson, 1992, 207 pp.

A History of Writing
(revised edition),
by Albertine Gaur. New York, Cross River Press, 1992, 236 pp.

Reading the Past: ancient writing from cuneiform to the alphabet
introd. by J.T. Hooker. Berkeley/London, University of California Press/British Museum, 1990, 384 pp.

The Art of Writing.
An exhibition in fifty panels
Paris, Unesco, 1965 102 pp. (out of print)

The Study of Writing
(revised edition)
by Ignace J. Gelb. Chicago, University of Chicago Press, 1963, 295 pp.

La grande invention de l'écriture et son évolution
by Marcel Cohen. Paris, Imprimerie Nationale, 1958, 2 vols.

Naissance de l'écriture: cunéiforme et hiéroglyphes
by B. André and C. Ziegler. Paris, Réunion des Musées Nationaux, 1982, 383 pp.

Massoudy Calligraphe
a video film on the art and technique of Arab calligraphy (1995). 27 minutes. 190 French francs from Oroleis de Paris, 23 rue Dagorno, 75012 Paris.

SOME DEFINITIONS

ALPHABET: a system of signs expressing the basic sounds of a language. Unlike scripts of pictographic origin—such as cuneiform or hieroglyphic scripts—based on a large number of stylized symbols, an alphabet reproduces at least consonant sounds via a small number of simplified symbols. After a long process of evolution, the Phoenician alphabet of 22 letters took shape around 1100 B.C., and later spread to many cities on the Mediterranean rim. Around the 8th century B.C., it was adopted by the Greeks, who added letters for the vowels, thus making the world's first complete alphabet.

CALAMUS: a reed whittled to a point or bevelled and used for writing and calligraphy.

CALLIGRAM: a text, usually poetic, the words of which are arranged so as to form a decorative pattern (also known as pattern poetry).

CODEX: to replace papyrus scrolls, which were awkward to handle, sheets of parchment bound into the form of a book or codex (plural codices) first appeared in Rome in the 1st century A.D. Very long documents could be reproduced in this form.

CUNEIFORM: cuneiform ("wedge-shaped") script, which first appeared between 4000 and 3000 B.C. in Mesopotamia, may be the world's oldest form of writing. Originally pictographic, its signs (about 550 derived from the permutation of 4 basic elements) gradually came to have syllabic values, enabling phonemes as well as objects to be designated. This process was accompanied by a reduction in the number of signs and a simplification of their forms, leading eventually to the creation, in Phoenicia, of the first alphabet.

GLYPH: a writing sign incised or carved on materials such as stone, as in pre-Columbian civilizations.

HIEROGLYPHIC: Egyptian pictographic or figurative writing used as early as the 4th millennium B.C., in which each hieroglyph or sign (among some 700) represented an object. Ideograms were also used to express certain ideas, and phonograms to render sounds. A strikingly successful use of hieroglyphs (etymological meaning = "writing of the gods") was for monumental inscriptions.

ICON: a sign that imitates the object it describes, e.g. the drawing of a house to represent a house.

IDEOGRAM: the representation of a message or an idea by means of drawings, in some cases schematic and symbolic. Several varieties of ideographic writing are known, including cuneiform, Egyptian hieroglyphics and Chinese.

PHONEME: a unit of spoken speech (vowel or consonant).

PHONOGRAM: a sign or part of a sign representing a word, a syllable or a phoneme. The basis of alphabetical writing, the signs of which represent only sounds.

PICTOGRAM (OR PICTOGRAPH): an element in writing that represents an object by means of stylized signs or symbols. Each pictogram has a specific use, but an abstract idea may be expressed by combining several of them. The first stage in writing.

Sources: *Le grand atlas des littératures*, Encyclopædia Universalis, Paris 1990. *Nouvelle Encyclopédie Bordas*, Paris, 1988.
Webster's Third New International Dictionary, Encyclopædia Britannica, Chicago, 1981.
The New Encyclopædia Britannica, 15th edition, Chicago, 1986.

A colossus with feet of clay

"The sight of this starving child pains me/Like a great thorn", wrote that giant of Spanish poetry Miguel Hernández. What would he write today if he knew that only a few months ago a radio station in Rwanda was broadcasting messages urging the murder of children, or if he had seen the television pictures of corpses with hands tied behind their backs floating in the waters of Lake Victoria? He would say that a society which tolerates the intolerable is a society in decline. He would say that intellectuals should show their indignation, not just by speaking out, but, above all, by taking action so that such events can never happen again.

Since the end of the Cold War and the decline of the Soviet regime, long-standing conflicts have re-emerged and new ones rooted in national, cultural, ethnic and socio-economic differences are erupting into violence.

It is a good moment to repeat that a war is never won. Never mind that history books tell us the opposite. The psychological and material costs of war are so high that any triumph is a Pyrrhic victory. Only peace can be won and winning peace means not only avoiding armed conflict but finding ways of eradicating the causes of individual and collective violence: injustice and oppression, ignorance and poverty, intolerance and discrimination. We must construct a new set of values and attitudes to replace the culture of war which, for centuries, has been influencing the course of civilization. Winning peace means the triumph of our pledge to establish, on a democratic basis, a new social framework of tolerance and generosity from which no one will feel excluded.

A rich but vulnerable world

We are living in a time of hope. The expectations of peace, co-operation and development raised by the changes in the last five years can still be met. Rapid advances in science and technology hold out the possibility that we will discover new solutions to many social problems, such as unemployment and drugs. In terms of public health, medical research gives grounds for hope that pandemic diseases such as Aids and cancer may be eliminated. The spectacular development of the media provides new opportunities for education and culture. Computers and fibre optics have brought a new dimension, unthinkable until recently, to the organization and dissemination of knowledge and to data processing and resource management.

And yet this world so rich in resources, knowledge and experience, shaped by the most progressive and dynamic societies ever known, is extremely vulnerable. As in the biblical dream of king Nebuchadnezzar, we stand before a colossus made of precious metal but with feet of clay. An exclusively quantitative view of progress and an obstinate attitude of consumerism and wastefulness are daily creating an ever-widening gap between a minority which enjoys the benefits of progress and the immense majority of the world's inhabitants, for whom well-being and a minimum standard of living still seem a distant mirage.

A precarious balance

At a time when the Western countries are entering the age of "information superhighways", there are around the world 600,000 human settlements without electricity. At a time when the industrialized countries of the North have millions of university-educated men and women unable to find employment, the countries of the South are home to 900 million illiterate people, often working in subhuman conditions.

As long as this breach widens, life on our planet will become ever more precarious. For the same scientific and technological development that made possible the opulent life-style of the industrialized North has also brought the world together in a dramatic fashion. Today more than ever, the world is one. The drought or war that leads to an exodus from an African country also affects its European neighbours, further complicating the economic crisis and compounding the problem of unemployment by that of massive and uncontrolled emigration. However, the reverse is also true: an economic crisis which destroys an industry in North America or Australia may leave a South American peasant or a Central Asian miner without the means of subsistence.

Nothing illustrates this situation better than environmental issues. The irrational use of fertilizers, the accumulation of nuclear waste, air, water and soil pollution, loss of biologicial diversity, depletion of certain non-renewable resources—these are some of the dangers which threaten our entire planet, because the degradation of the natural environment knows no frontiers.

UNESCO is endeavouring by various means to stimulate debate and encourage the search for solutions that will reverse those trends, reduce the growing disparity between the standard of living of the industrialized North and the developing South, foster scientific and cultural creativity and promote peace.

Unfortunately, our society is still shaped, essentially, by the culture of war. The production apparatus of the modern world is closely linked to the military machine. Now that the Cold War is over and democratic trends are providing us with additional safeguards of international peace, we realize that we are not prepared to confront the most serious and urgent dangers which threaten the future of our civilization. We are prepared for the past; we are not prepared for the present.

Events after 1989 were expected to bring about a re-evaluation of the concepts of defence and security throughout the world. Yet the conceptual re-evaluation has not thus far led to any significant reduction in defence spending. The much-touted and eagerly awaited "peace dividend" has failed to result in massive investments in education, public health or aid to developing countries and other sectors where public action is urgently needed.

The view of progress and development that has prevailed until very recently is in need of a thorough overhaul: the idea that development is little more than growth, and that raising industrial production indexes and boosting the consumption of electricity is enough to modernize a country and provide a better future for its people. This mistaken belief results in the imposition from outside of development models which fail to take due account of the historical, cultural and psychological particularities of the people to whom they are applied. One consequence of this approach is the enormous material and emotional price paid by many countries which have been obliged by international financial institutions to implement economic structural adjustment policies.

The crucial question facing us today is who will reap the benefit of development. Are our efforts directed towards the men and women of tomorrow, the generations who will inherit the earth, or are we acting to satisfy short-sighted economic interests or crude ambitions of power? At the beginning of this century, another Spanish poet, Miguel de Unamuno, was already vigorously criticizing this conception of progress. "We must produce," he wrote, "produce as much as possible in all fields at the least cost, and then let the human species collapse at the foot of the monumental tower of Babel, overburdened with goods, machines, books, paintings, statues, tokens of worldly glory and history!"

The consumerist Tower of Babel

Above all let us not yield to the siren song of unrestrained consumption. Having freed ourselves from communism, we must now liberate ourselves from consumerism. The idea that consumption can expand indefinitely is untenable. The risk of exhausting non-renewable resources, the need to avoid pollution and environmental degradation, and the threats to the ozone layer, to biological diversity, to the health and well-being of future generations and to the natural and cultural heritage of humankind are the strongest arguments against any fantasy of unlimited consumption for the next century.

It is essential to counter that mirage with a vision of all-round, sustainable development, having due regard for the environment, consumption based on quality and not on quantity, and a rehabilitation of spiritual values which will help reorder our priorities and which must necessarily lead to frugality and ecological restraint. In the coming decades, quality of life will be increasingly bound up with austerity and a responsible attitude towards the environment.

Nebuchadnezzar's dream ends as follows: "A fallen stone, not thrown by anyone, struck the statue on its feet of clay, and destroyed it". Our civilization, this highly complex machine, with its extraordinary achievements in such diverse realms as the arts, science, industry and culture, is like the biblical colossus. If we fail to correct properly the imbalances which threaten it, if we fail to achieve harmony among all peoples in a framework of justice and dignity, if we are not capable of leaving a habitable planet to future generations, then we shall become daily more like a statue with feet of clay, at the mercy of a pebble hurled at us by blind fate. ■

Perched 3,000 metres up in the high plateaux of the Andes, Ecuador's capital has a remarkable historic centre which in 1978 won it a place on UNESCO's World Heritage List.

UNESCO IN ACTION
HERITAGE

Once upon a time a Spanish hidalgo is supposed to have said to his architect: "Draw me the plans for a big square patio with a few rooms around it." Even today, in the historic centre of Quito and on the outskirts of the old city, there are still some low, white houses of this kind, their red tiles darkened by time. Each one has a wood and wrought-iron gate opening onto a large inner courtyard where grey paving stones and inlaid yellow ox-bones form geometric motifs around a fountain. The "master of the great house" would ride into the courtyard on horseback, and his tenants would unload the farm produce they had brought on mules or carts. Around the patio were rooms with barred windows. Here, at dusk, came girls seeking to escape the tedium of their secluded lives or be serenaded by their official suitors.

It is hard to say whether this type of architecture sprang from or gave rise to a specific conception of urban planning. What is certain is that the conquistadors were instinctive if untutored town-planners and that here as in all other American cities they first marked out a central patio-like square around which they built a church, a governor's residence, an archbishop's palace and a town hall. Then, after the land had been divided between the conquistadors and the religious authorities, they

Quito, a city near to heaven

by Jorge Enrique Adoum

Left, the fine view of Quito from the peak of Panecillo, 183 metres above the city. .

Above and below, the domes and façade of Quito's church of La Compañia de Jesus. (17th century).

drew up a regular street-plan. To recapture something of old Quito, the municipality is restoring to these streets their original names: the Street of Forges, the Jewellers' Street, the Street of the Seven Crosses; the Hill of Sighs, the Hill of the Torrent; the Crossroads of Souls, of the Virgin, of the Toad. These narrow streets were intended for horses and earriages—no vehicle could even enter the Street of the Night Watch, a winding alley lit with ancient lanterns—and the buses that pass through them today almost scrape the walls.

From the city centre to the suburbs narrow streets lined with little houses stretch like the open fingers of a hand, following the haphazard contours of the city until they reach the clouds at an altitude of almost 3,000 metres. Is it the rarefied air that imposes on Quito the slow rhythm, the sense of time to spare that made Henri Michaux say: "Here we all smoke the opium of high altitude, speak in low voices, take short steps, are short of breath. The dogs fight little, and so do the children; there is little laughter."?

A mayor of Quito once decided that the walls of the houses should be painted white and the woodwork of doors and windows blue, with the result that the city came to resemble (in this respect only) certain Mediterranean towns. Then someone remembered that in the eighteenth century the main buildings in the city centre had had coloured façades (in 1757 a traveller noted that "Façades whitewashed from top to bottom in gaudy colours are not rare") and so they were repainted yellow, green or blue. In the modern public buildings in the residential area in the north of the city on the other hand, the dominant colour is the grey of concrete and the smoked glass windows that protect against the bright sunlight which—because the sky is so near?—is unlike that found anywhere else in the world.

The ornate interior of the Cathedral (1559-1562).

The church of San Francisco took so long to build that the emperor Charles V emerged every evening onto the balcony of his palace in Toledo, convinced that he would be able to see its towers in the distance. Later they were reduced to rubble by an earthquake.

SYMBOLS OF POWER

Plaza Mayor, also known as Plaza de la Independencia—because of the independence monument put up there in 1906—or simply as Plaza Grande, is the symbol of the life of the city. This place where people met to exchange political gossip and rumours, to show dissension, to fetch water, listen to a band or be photographed, is freer, more open and peaceful than it once was. The prison-like iron railings that once surrounded it have been removed and its fountains have gone; it has been beautified with flower beds and benches for the retired and the unoccupied.

On one side of the square is the cathedral. Originally a modest wattle and daub construction, it has constantly been extended and embellished since the sixteenth century. Its coffered ceiling, the copy of a Spanish Moorish original, dates from the mid-nineteenth century. The "cinderella of American cathedrals" in comparison with those of Mexico or Lima, it has wonderful gilt altars on a par with those of other Quito churches, whose insolent splendour overwhelms the visitor and contrasts with the poverty of the faithful and the wretchedness of the beggars at their gates.

Opposite the cathedral, symbol of divine power, is the archbishop's palace, the encapsulation of ecclesiastical power. Two dates, 1852 and 1920, are inscribed in Roman figures on its façade. A surprising feature of this neoclassical building is a loggia on its upper storey whose symmetrical columns are joined by a balustrade and surmounted at each end by a triangular pediment.

The governor's palace is equally neoclassical. Inside, on each side of a monumental staircase, is another patio. Its façade is adorned with a massive doric colonnade giving onto the square and two lateral structures surmounted by triangular tympani. Inaugurated in 1830 when the Republic was proclaimed, it was the last architectural project of the colonial power. A plaque indicates the place where a theocratic tyrant was assassinated in 1875 with a machete wielded by a jealous husband (although he was not necessarily motivated by jealousy) and, decked out in his ceremonial uniform and seated on a throne, presided over his own funeral in the cathedral.

One of the old city's most picturesque streets, Calle de La Ronda.

In the lower part of the building, whose stones are thought to have been brought from a distant Inca monument, are a number of small shops where souvenir sellers will sell you trashy objects which are poor imitations of the traditional indigenous craftsmanship which has for generations produced wonders in gold, filigree, wrought iron, wood, wax and vegetable ivory, and will even propose counterfeit "shrunken heads."

The building which has had the most checquered career is the municipal building. It began as "a hut on a plot of land belonging to the king" in 1538—a rough-and-ready town hall for a city bursting at the seams with gold. It was rebuilt many times before being demolished and its site used as a car park. The height, colour and proportions of the present building, which dates from 1974, seek to harmonize with the other buildings around the Plaza Grande.

Strangely enough, a campaign to restore the historic centre led to the

JORGE ENRIQUE ADOUM,
an Ecuadorian poet and novelist, was formerly a member of the editorial staff of the *Unesco Courier*. His most recent publications include *El tiempo y las palabras* ("Time and Words", 1992) and a bilingual Spanish/French anthology of 20th-century Ecuadorian poetry (Fondation Patiño, Geneva, 1993).

expulsion of the Indian and mestizo women who sold rag dolls, ribbons, buttons, crocheting hooks and knitting needles at the entrance, and were a familiar feature of the Quito landscape. Today, only five of them are left and they have moved to the entrance to the Plaza de Santo Domingo. On the Plaza Grande they were for a time replaced by itinerant vendors of smuggled watches, cigarette lighters, spectacles and personal stereos, and hawkers of cigarettes, chewing gum, razor blades and lottery tickets.

AN ASSORTMENT OF ARCHITECTURAL STYLES

Around the turn of the century, a number of buildings in a variety of styles were constructed around the Plaza Grande: the old university, a bank which is no longer a bank, a hotel which used to boast of offering its customers the opportunity to see parades, processions and revolutions "from their bed". The hotel is an example of what might be called architectural esperanto: each of its storeys is built in a different style to produce what has been called "a highly interesting piece of eclecticism".

In García Moreno street, once the street of the seven crosses, an assortment of civil and military architecture spanning the sixteenth and the twentieth centuries—arches, columns, vestibules, porticos—is concentrated into barely 200 metres. Religious architecture is represented by the churches of the Sagrario, La Compañia de Jesús and San Francisco. All of them house art treasures—paintings, sculptures and gold leaf of the celebrated Quito school, works by indigenous artists such as Caspicara and Pampite and mestizo artists such as Miguel de Santiago who have been compared with Zurbarán.

The church of San Francisco and its adjoining convent occupy three hectares in the centre of Quito. They have been dubbed "an Escurial in the Andes", although their construction began before that of the Escurial in Spain—barely fifty days after the foundation of Quito by the Spaniards on 6 December 1535. It is said that the forecourt was completed in a single night by the devil in order to gather in a tormented soul who was eluding his grasp. The work took so long, and the Franciscans asked Charles V for so much money to build the towers, that the emperor emerged every evening onto the balcony of his palace in Toledo, convinced that he would be able to see them in the distance. Later they were reduced to rubble by an earthquake.

On the church's curious perron of concentric semi-circular steps all kinds of spin-off of faith are for sale: incense, medallions, sacred images, decorated candles. And on the vast square, where until the beginning of the century water carriers filled their buckets at the fountain with water to sell from door to door, all kinds of people come and go, including the Indians whom Michaux saw, "thick-set, broad-headed, walking with short steps", wrapped in blue, red or grey ponchos and carrying on their backs a refrigerator or a cupboard roped to their forehead. On Good Friday this is the culminating point for a procession of hooded figures who flagellate themselves with thongs and chains, a form of penitence not unconnected with masochistic exhibitionism.

A SUPERB MOUNTAINOUS BACKDROP

The tutelary summit of Pichincha and the anonymous mountains which form part of the Andes provide Quito with a superb backdrop. In the evening, from the top of Ichimbia or Panecillo—where the Indians went to worship the sun and where a winged statue of the Virgin Mary has been erected—the city can be seen chessboard-like, marked out with lines of light and sprinkled with yellow, red and green dots. Glaciers of light leading nowhere descend from the hill of San Juan, where needy citizens and the flotsam and jetsam of the rural exodus colonize the hitherto bare slopes.

It is true that tunnels, jerry-built mini-expressways, level and unlevel crossings, supermarkets, ministries and impersonal hotels have been built, but only in the residential north, a city apart which has nothing in common with that which UNESCO has proclaimed part of the "universal heritage of mankind" except its proximity to the mountains. Quito obstinately refuses any kind of modernization, as if wishing to continue to merit the titles of "Florence of America" or "Rome in the tropics" which it owes only to its geographical situation. Other names—"Quito, ante-chamber of paradise", "Quito two steps away from heaven" or an old popular refrain, "On earth Quito and in heaven a window to see Quito" situate it near to the empyrean. In one film a gangster dreams of doing one last job before retiring to Quito, "where you can touch the stars with your hand". Quito has also been called "the face of God". Perhaps, but if so it is a sombre face, like that of the skinny girls, shivering with cold at night, glued to the doors of restaurants and offering diners and passersby flowers which are as sad as they are and which, like them, have faded too quickly. ■

An open-air market.

"Entwined lovers", a 17th-century Persian miniature.

Sâ'eb of Tabriz

prince of poets

by Hossein Esmaili

Mirzâ Mohammad-Ali, also known as Sâ'eb of Tabriz, is one of the most brilliant post-classical Persian poets. He was born in Isfahan, then the capital of the Persian empire, in 1607 (400 years ago according to the Islamic calendar) into a family of merchants from Tabriz who had travelled to Isfahan in search of fame and fortune. At the age of twenty, already a competent prose writer and calligrapher, he began to make his mark as a poet. He may have inherited his early taste for poetry from one of his ancestors, Shams-é-Maqrebi, a mystic poet of the fourteenth century.

Sâ'eb began to attend court but was disappointed by the atmosphere there. Torn by centuries of dissension and invasions, Persia was beginning to regain its cohesion under the iron hand of the Safavids. But the rulers of this new dynasty began to impose the Shi'ite faith on the Iranian people, causing social disruption which led numerous intellectuals to flee from Isfahan, where theologians held sway and made no attempt to hide their fierce hostility to poets, philosophers and mystics. Sâ'eb described the situation in one of his poems, when he wrote: "Today intelligence and reason hardly count any more; it is an age of turbans and well-filled bellies".

As a result of this, Sâ'eb left Persia for India. On the way he stayed for three years with a fellow poet, Zafar Khan, the governor of Kabul. When he arrived in India he entered the service of the Mughul emperor, Shahjahân, who was a great admirer of Persian literature and entertained him with lavish hospitality. He also received a warm welcome from the other court poets, who admired his style of writing.

In 1633, his father joined him and persuaded him to return home. Back in Isfahan, where he lived until his death in 1675, he was given the title "Prince of poets" by Shah Abbas II and alternated between life at court and periods of isolation and retreat. He wrote many panegyrics and a historical epic in honour of the king, but mainly worked in the lyrical vein of love poetry known as ghazal—short, elegantly written poems that brought him fame and ensured his place in posterity.

AN ENIGMATIC FIGURE

Sâ'eb was the most celebrated poet of his day. His contemporaries read all his poems they could get their hands on, and yet he complained that he was unappreciated and misunderstood. He was, and remains, an enigmatic figure. In spite of his great reputation in central Asia and India, the literary critics largely ignored him, and many of his poems were not published, although he was rightly considered one of the masters of the "Indian style" in Persian poetry. A hallmark of his style was his investigation of subtle ideas and his sometimes immoderate taste for complicated rhetorical figures. He loved to frequent tea houses, where he was admired by down-to-earth people who quoted so often from his poems that they became well-known sayings. He could not stand the literary scholars who belittled him for his lack of rigour and his vocabulary larded with popular expressions.

Sâ'eb was a complete poet, a man who saw the world only through the prism of poetry. Unlike his predecessors, who went in for exotic and obscure metaphors, he was interested in the most trivial details of daily life and constructed his literary world out of humdrum actions and events. He used poetic subjectivity to adorn reality with the colours of dreams, to give it rhythm and elegance. For Sâ'eb everything has meaning and poetry: the gentle murmur of running water evokes the imperceptible passage of time; the ancient tree whose roots stretch into the bowels of the earth suggests that an old man clings to life with more determination than a young one; the bread that is easily removed from a cold oven illustrates how easy it is to free oneself from a world without warmth.

Sâ'eb's constant association of mirror images and ideas is ideally suited to Persian poetry, in which the two lines of a couplet complement or contradict each other. Sâ'eb's art breaks reality down into a multitude of poetic images and can be compared to the work of a miniaturist who builds up a scene from a crowd of tiny shapes.

The four-hundredth anniversary of the birth of the "Prince of poets" is an opportunity to rediscover his exquisite works and to shed new light on an original and elegant form of poetry that is still not widely known. ■

HOSSEIN ESMAILI
is an Iranian researcher who lectures in Persian at France's National Institute of Oriental Languages and Civilizations in Paris. He is the author of a number of articles on Iranian art, culture and literature.

GREENWATCH

ENVIRONMENT-FRIENDLY OMAN

by France Bequette

Loading up with ice at Sur, a port on the Gulf of Oman, before embarking on a fishing expedition.

The Omanis like to claim that after Singapore theirs is the cleanest country in the world. It is certainly spotless. At the airport, the grey marble floor shines like a mirror. Not a scrap of waste paper or speck of dust can be seen. Parked outside are gleaming cars. A determined effort to keep Oman clean is backed up by radio and TV messages and enforced by hefty fines ($100 or thereabouts for a dirty car or a cigarette butt thrown from a window), while an army of sweepers in orange uniforms work night and day on the roads, picking up any rubbish that might, in spite of all the precautions, have fallen by the wayside. Even out in the desert rubbish bins—white-painted former oil jerrycans bearing the name of the nearest town—are emptied at regular intervals. The capital, Muscat, stretches for kilometres along the coast and is made up of white houses built in the approved Arab style, surrounded by trees and flowers. Water tanks, aerials and air-conditioners are hidden from view by variants of the wooden screens that are typical of the Arab world.

Oman is about the size of the British Isles and has a population of almost 2 million. It has a very wide spectrum of landscapes and soils. Covering 300,000 square kilometres on the southeastern tip of the Arabian Peninsula, it is bordered on the north and west by the United Arab Emirates and Saudi Arabia and on the southwest by Yemen. The coastline stretches 1,700 kilometres from the Strait of Hormuz, along the Gulf of Oman to the Arabian sea. The country's northern tip, Musandam, is a rocky peninsula indented by fjord-like coves. There is a fertile coastal plain (the Batinah), a mountain range (Jabal al-Akhdar) that rises to 3,000 metres, and vast stretches of desert.

SLAKING THE SULTANATE'S THIRST

Although heavy monsoon rains fall on the Dhofar in the south from June to September, the climate in the hinterland is dry and hot with annual rainfall no more than 100 mm. However, downpours may be so violent that the rivers (*wadi*). which are usually dry, overflow their banks and sweep everything before them.

Water is a major preoccupation for the Omani government. In March 1994, for example, the Minister for Water Resources sounded the alarm about steeply rising consumption. The restrictions are not felt in Muscat, which is supplied by a sea-water desalination plant, but between May and August (when temperatures hit 43°C in the shade) agriculture consumes 100 million cubic metres per month, i.e. 94 per cent of total consumption. According to the Minister, 80 per cent of the rainwater is lost to run-off into the sea, and 5 per cent to evaporation. In 1985 a recharge dam was built near Muscat to collect rainwater descending from the mountains. Five more have been built since then, and some fifty more are scheduled to be built in the next few years.

To prevent groundwater reserves from being exhausted, irrigation wells cannot be drilled without government permission. The number of requests is alarming—9,090 in three years, 6,365 of which have been approved, bringing the total number of wells to 167,000. This is worrying because reserves of fossil water, so called because it dates from ancient times when there was more rain in the region, are not being replenished in today's arid climate. The less used the better,

although reserves are estimated at 955 million m^3 and research is going on to determine whether there is any groundwater at deeper levels. Forty-nine field teams tour the country to check well registration, record well characteristics and take samples of the water to assess its quality. The data are entered into a database from which statistics and maps can be compiled. The wells must not be too close to the sea because of the risk of intrusion by sea water. Date palms in the Batinah have a limited toleration of brackish water and have been dying off.

Wadi el-Khalil, in the eastern Hajar mountains between Muscat and Sur.

KING SOLOMON'S WELLS

Water management in Oman is not a recent invention. A remarkable system of irrigation channels, known as *falaj*, was established about 2,500 years ago and is still in perfect working order today. Legend has it that Solomon, King David's son, came to Oman on a magic carpet with his djinn—spirits who could assume human or animal form—and built 10,000 channels in ten days. Water is tapped at the water table in the mountains and flows to the plains along man-made tunnels from three to ten kilometres long. Every 150 metres smaller wells have been dug into the tunnel to facilitate inspection. Where the tunnel emerges from the rock the watercourse divides into a series of narrow channels, some made of concrete. Ancient documents explain the water distribution system. Some 200 landowners have permanent right of access to a water channel, and many more enjoy temporary rights. A flow of forty-five litres per second irrigates forty hectares and serves about 1,000 people. A breach is made in the earth walls that surround each field, and closed when sufficient water has flowed through. Then the process is repeated for the next field. The same irrigation system is used in Iran, China and, oddly enough, in the Valais, the Swiss part of the upper Rhône Valley.

An irrigation channel on Jabal al-Akhdar ("The Green Mountain").

The small black fish wriggling in the *falaj* act as garbage collectors. Unfortunately, they do not touch the larvae of the anopheles, the mosquitos that carry the parasite responsible for malaria. In 1990 a programme to eradicate malaria was launched in Ibra, 100 kilometres south of Muscat. At the time there were 4,419 recorded cases of falciparum, the most virulent form of the disease. Today there are a mere forty cases. The task is enormous, for it involves monitoring a zone representing 12 per cent of the country's area and inhabited by 250,000 people. The area was divided up into 4-km^2 districts, each of which was sprayed daily with Temefosum, an insecticide that is non-toxic to humans and the environment. The insecticide is sprayed wherever the anopheles are likely to reproduce, in *wadis*, watercourses, wells and tanks. The results have been spectacular.

THE RETURN OF THE WHITE ORYX

The reintroduction of the white oryx, sponsored by the World Wide Fund for Nature (WWF), is another environmental success story. Sultan Qaboos imported from zoos in the United States several couples of this long-horned African antelope that had been hunted to extinction, and they have since prospered. The sanctuary where they live has recently been added to UNESCO's World Heritage List.

Five species of turtle studied by WWF and the World Conservation Union (IUCN) over the past twelve years have not fared so well. Wolves, foxes, gulls, ravens, ghost crabs, carnivorous fish, seabirds and local people are all enamoured of their flesh and eggs. Human consumption is

part of a tradition that has existed for 7,000 years but it must be vigorously resisted if hawksbill and green turtles are to be saved from extinction.

Another problem facing Oman is that of coastal pollution. IUCN representative Rodney Salm spent seven years from 1984 to 1992 working on a coastal zone management programme for the Sultanate. His reports warn against oil and tar pollution on the beaches, partly due to illegal discharge of oil by ships at sea, the mining of sand for building, encroaching new roads, rotting fish refuse and the dumping of waste. The migratory birds for which Oman is justly famous may no longer be able to alight on the reed-bordered lagoons, for seven of the seventeen sites are seriously threatened. Corals, some species of which are unique, are being damaged by fishing nets, anchors and litter such as plastic bags and empty paint tins.

The Ministry of Regional Municipalities and Environment is taking the situation in hand. A royal decree on the conservation of the environment and the prevention of pollution was promulgated in 1982. In 1993 the ministry published a booklet tracing twenty-three years of action in response to these problems. In answer to marine pollution by oil spillage, Oman is planning to build a ballast-dumping centre for oil tankers. Sand extraction and the dumping of waste on beaches have been halted, and access to the main reproduction areas for turtles is limited to 60 persons per day. Building less than 150 metres from the high tide mark is forbidden, and housing construction, like all building in the Sultanate, must be authorized by the ministry.

Oman is a "life-size" environmental laboratory. Considering the proven determination of the authorities to take proper care of the country, and the resources they have mobilized to do so, it will be very interesting to follow the strategies they adopt and measure the results they achieve in the coming years. ■

FURTHER READING ON OMAN

Oman 94,
Ministry of Information, Oman, 1994.

Marine fauna of Oman: cetaceans, turtles, seabirds and shallow water corals,
IUCN, 1993.

Royal Decree No. 10/82 issuing the law on the conservation of environment and the prevention of pollution.

The Sultanate of Oman and its concern for its environment
1993.

Coastal Oman,
IUCN Bulletin No. 4, 1992.

FRANCE BEQUETTE is a Franco-American journalist specializing in environmental questions.

The old fort of Birkat el-Moz at the foot of Jabal al-Akhdar is a favourite tourist attraction.

THE MIDDLE EAST: A GLOOMY ENVIRONMENTAL OUTLOOK

Middle East and North Africa Environmental Strategy: Towards Sustainable Development, a recently published World Bank report, notes that 45 million Arabs today live in cities where levels of air pollution are higher than World Health Organization guidelines. Within the next decade the report predicts that environmental problems will worsen as the total population of Arab states grows from about 240 million to over 320 million, with rural populations increasing by about 12 million and accelerating the pressure on arable land, which at present makes up no more than 7% of total land surface. Some 115 million people will be living in cities with unacceptable air pollution levels. Unless steps are taken to cope with these problems, they are bound to jeopardize the region's economic and social development. ■

THREATS TO ZAIRE'S VIRUNGA PARK

The Pan African News Agency (PANA) reports that the vast, 790,000-hectare Virunga (Volcanoes) National Park in eastern Zaire is feeling the after-effects of the civil war in Rwanda. Almost two million Rwandans have taken refuge in Goma, about 50 kilometres from the Park. Last June almost a million poachers were taking between 410 and 770 tons of forest products (especially fuelwood) from the Park each day. By early November, nearly 300 km^2 had been either partially or totally deforested. In 1989 there were 23,000 hippopotamuses in the Park; today only 11,000 are left. The Park has been on the World Heritage List since 1979, but in 1994 UNESCO was obliged to transfer it to the List of World Heritage in Danger. ■

TRUNK PARALYSIS AFFLICTS ZIMBABWE'S ELEPHANTS

PANA reports from Harare (Zimbabwe) that specialists are trying to find the cause of a mysterious disease that has afflicted elephants in the country during the past few years. The ailment, known as Flaccid Trunk Paralysis (FTP), makes it painful for the pachyderms to raise their trunks, thus to eat properly. It may be caused by lead poisoning, toxic wastes such as used batteries, or perhaps the pollution caused by motor boats. Although the syndrome first appeared on Fothergill Island, a tourist centre in the north of the country, twelve cases were reported in July 1994 in the Matusadonha area, far from the island. ■

WORLD

A MODEL DUMP

At Champteussé-sur-Baconne in France's Loire valley, toxic waste is being dumped on a 40-hectare site which is a model of its kind. The 25,000 tons of waste that arrive annually are sorted and loaded into polyethylene sacks before being placed in deep honey-comb-shaped holes excavated in the clay soil. The holes are lined with "geomembranes"—high-density polyethylene tarpaulins and geotextiles such as felt. Rainwater is collected in pipes, regularly analysed, and when necessary channeled into a purification plant. French law requires that each region of the country should have a class-1 dump, designed to receive the most highly toxic wastes. However, no new dump has been opened for the past 12 years, whereas from 2 to 6 milllion tons of toxic wastes are produced annually. ■

DENMARK'S WIND OF CHANGE

The world's leading manufacturer of electricity-generating wind turbines, Denmark has around 4,000 of them currently in operation, supplying almost 3% of the country's electricity, i.e. roughly half the capacity of a nuclear power plant. One reason for the growing number of turbines is that people who invest in them enjoy tax relief. As the windiest sites on land are starting to become saturated, the Danes are now building off-shore turbines. They cost more, but the sea breeze is an inexhaustible resource. ■

THE WORLD'S FIRST LOCUST FAIR

Ouagadougou, the capital of Burkina Faso, became the international capital of the war on locusts last January when the world's first "Locust Fair" was held there. Visitors to the Fair found information on the latest developments in training, research and the monitoring of anti-locust drives. This destructive crop eater strikes sporadically but catastrophically in some sixty countries. French acridologist Michel Launois has produced a 48-page strip cartoon book called *Les dents du ciel* ("The Sky's Teeth"), which provides valuable pointers as to what people can do when locusts appear. It is distributed free of charge by the Centre Français de Co-opération International en Recherche Agronomique pour le Developpement (The French Centre of International Co-operation in Agronomic Research for Development): CIRAD-PRIFAS, BP 5035, 35032 Montpellier, Cedex (France); Tel.: (33-1) 6761-5845; Fax: (33-1) 6741-0958. ■

INITIATIVES

GENEVA'S INSTITUTE OF DEVELOPMENT STUDIES

The Institute of Development Studies (IUED) in Geneva (Switzerland) was founded in 1961 by the Canton of Geneva as a centre for African students and for research and discussion on Third World issues. Since then its activities have expanded considerably to provide professional training in development and access to the latest research, especially in health care. Today the Institute has a library containing more than 50,000 volumes, a periodicals service with 1,100 journals, and a documentation centre with 1,200 information dossiers filed by country, subject and institution.

The Institute provides teaching via lectures, seminars and modules leading to a diploma in advanced studies, a research diploma or a doctorate. The students are from Italy, Romania, Finland, Benin, Senegal, China and the Philippines, as well as from Switzerland. The Institute helps them to draw up development projects and to find their bearings when they go into the field.

A Studies and Projects Service provides follow-up to ensure that the Institute's operational contracts in developing countries are successfully completed, working in tandem with local institutions and bolstering their expertise. For example, the IUED is involved in a four-year, 12-million Swiss-franc water project in Niger that is designed to help Niger's Hydraulics and Environment Ministry to supply villages with water, manage groundwater resources and train staff. In Benin 7 million Swiss francs have been invested to help improve the health of the inhabitants of Borgou and Zou provinces. A project in Madagascar is designed to reorganize Antananarivo's central pharmacy, publish a therapeutic guide for doctors and strengthen the network of community pharmacies by improving the delivery of medicines and training staff. At Cap-Haitien in Haiti the goal is to improve living conditions by organizing the collection and recycling of domestic waste into compost which is then offered to small farmers and nurseries in the vicinity. Similar aid has been given to a group of women in Tejalpa Morelos, Cuernavaca (Mexico) to help them recycle waste.

The IUED publishes a series of theme-oriented *Cahiers*, and a remarkable 400-page directory, *Swiss Research and Developing Countries, 1993-1994*, which gives a global view of the state of Swiss research linked to developing countries, providing particulars of institutions, resource-persons and research projects worldwide ■

IUED, 24, rue Rothschild, Case Postale 136, 1211 Geneva 21, Switzerland.
Tel.: (41-22) 731-5940;
Fax: (41-22) 738-4416.

An international debate on literature today and tomorrow

Between 1988 and 1994, UNESCO and PEN International organized a series of symposia on the theme of literary creation on the eve of the third millennium. At the meetings, held within the framework of the Decade for Cultural Development, writers from South America, Africa, Asia and the Arab world discussed the main aspects of creative writing in their respective regions today.

LATIN AMERICA: GOING FOR BAROQUE

A meeting on "The dynamic role of the Latin American and Caribbean literatures in world literature", held in Brasilia from 18 to 21 April 1988, was attended by several hundred writers and intellectuals from sixteen countries in the region.

The participants were particularly struck by the way in which urban themes have taken the place of rural subjects. Rampant urbanization has brought a change of perspective and sensibility to the Latin American novel. Instead of the compassionate but distant treatment of indigenous people found in the socially committed "peasant novel", the "urban novel" presents a picture of the indigenous condition viewed from within. The description of the urban landscape, or rather its recreation in a work of literature, is one of the triumphs of this genre.

However, Nature is intensely present and lends itself to symbolization of such luxuriance that European languages collapse under the strain. Some people have even wondered whether they should not be regarded as dead languages. But this would be a mistake because Latin American writers enrich these languages and adapt them to their world by drawing on oral and dialect sources. Thus their works are receptive to indigenous myths and the indigenous imagination, which reach the contemporary world via the written word.

Life in the New World, as depicted in Latin American novels, appears fantastic to readers of other continents, and French critics have coined the term "magic realism" to describe this kind of fiction. The writers themselves seem to prefer the adjective *baroque*, which describes more accurately the social and cultural disparities they deal with. Caught between Utopia and History, a prey to parody and dizzying absurdity, the protagonist of the Latin American novel bears within him a notion of identity rooted in anguish and division, where the dream of the Indian meets, contradicts, opposes—or espouses—the dream of the immigrant.

AFRICA: NEW FORMS OF EXPRESSION

Four years later, a meeting held in Harare (Zimbabwe) from 10 to 13 February 1992 was the occasion for a discussion of similar themes in African literature: the force of myth and Nature, a sensibility dominated by the supernatural, and the problem of vehicular languages inherited from colonialism.

A Western language, because it is so widely spoken, gives writers access to the contemporary world and an opportunity to reach a wider audience. On the other hand, it distances them from the vernacular reader and still bears the imprint of the colonial past. As for national languages, they have proved intractable vehicles for expressing modern attitudes and remain a prisoner of the tradition whose myths they perpetuate. Caught between the two, new African societies find themselves deprived of a means of expression; their literature abounds in fictional heroes too far removed from reality.

The transition from a culture of oral tradition to a culture of the written word has given rise to a number of serious problems. But it also bears the seed of a new literature in which, once the traces of the colonial past have been identified, modern social values can finally be integrated and expressed.

The discussions constantly returned to the subject of the writer's commitment and to committed literature. If writers should observe and express social conflicts, they should also be able to communicate the message of progress without sacrificing the aesthetic quality of their work.

In their conclusions, the participants expressed their satisfaction over the place won for itself by African literature, which has asserted its own identity, linked especially to oral tradition, within English, French and Portuguese literatures, whose languages it borrows. Nevertheless, this young literature has not yet succeeded in reconciling the ancient values of the continent with the intellectual and aesthetic forms inherited from the West.

ASIA: TURNING AWAY FROM MODERNISM?

For Asian writers, invited to Seoul in 1992, the central question was that of tradition. Far removed from the passions and concerns which had dominated the meetings in Brasilia and Harare, the participants emphasized moderation as an aesthetic and intellectual virtue as well as a political quality, and regarded originality as being in bad taste, even a moral flaw, inimical to the harmony that literature should express. Only tradition and culture, the community and its values, were considered capable of responding to the anguish caused by the questioning of values imported from the West, in particular the myth of Progress. If the colonial past continues to haunt the mind and the imagination, it is only because it constitutes a threat to national and cultural identities and to current social trends.

The language problem, which was also discussed in Brasilia and Harare, is a singularly thorny one in Asia, where Anglo-American is in the process of becoming the vernacular language. The divorce between life as they live it and the language in which they express themselves is causing writers to experience a personality crisis, which is aggravated by the multiracial and multilingual character of many Asian countries. Here too a solution has been sought through the restoration of a kind of harmony that is rooted in tradition. The village and the family, the firm foundations of individual and collective identity, which in Asia have never been subject to attack as they have in the West, remain sacred.

Nature, a metaphor for the harmony and peace of the soul, continues to be a favourite theme in Asian literature. Writers feel particularly concerned by the dangers that threaten it, and anguish about the environment sometimes leads to a return to religion or even, in certain countries, to fundamentalism. There is a risk that human rights, towards which the participants seemed fairly indifferent, may go by the board. On the other hand they welcomed the death of ideologies in the West, because it paves the way for a return to the self, the family, the village and tradition.

Little was said about the idea of creation during the discussions, which focused above all on a determination to return to the Self through separation from the Other.

ALEXANDRE BLOKH

THE CHALLENGES FACING ARAB LITERATURE

The Arab writers' symposium held in 1994 in Carthage (Tunisia) was largely devoted to democracy, freedom of expression and the fundamentalist threat. The meeting was overshadowed by the killing of writers and by death threats against others. Salman Rushdie and the *fatwa* against him were discussed, as were obscurantism and the fundamentalists' determination to impose criteria from another age that could reduce intellectuals to silence. Such is the pressure of fundamentalism that even the most independent-minded writers practise self-censorship. Great vigilance is required to avoid a return to an age of totems and taboos.

This is not just a political problem. It is a challenge for civilization, as the declaration signed by the majority of the twenty writers present emphasizes, denouncing the catastrophe which might befall Arab nations if they fail to overcome fundamentalist barbarism. The text specifies that at the time of its splendour, Islam was tolerant of outsiders and receptive to them, and did not reject pluralism or mixing. Only a return to these values can restore the fertility of Islamic civilization.

Another question that often came up, especially among participants from the Maghrib, was that of the language of expression chosen by writers. Voices were raised against those using foreign tongues, notably French. Tahar ben Jelloun of Morocco responded by reprimanding "the watchdogs" of culture who think they have the right to distribute certificates of "Arabness". His compatriot Mohamed Berrada and the Tunisian writer Habib Selmi pointed to the multiplicity of the linguistic levels which, within the Arabic language, nourishes their novels.

The question of literary forms and sources opened a debate on the dialectic between the particular and the universal. Palestinian writer Emile Habibi recalled that different forms of classical narration could be adapted to modern fiction. Several participants, including Salah Stétié of Lebanon, spoke of the role of Sufism as a source of inspiration for contemporary writing. Others, however, such as Egyptian writer Sonallah Ibrahim and Lebanon's Elias Khoury, felt it was necessary to break with traditional forms in order to meet the demands of post-naturalist documentary, so that literature can fulfil one of its vocations, which is to be the historical witness of the crises and changes experienced by peoples.

The Lebanese poet Adonis perhaps came closest to indicating a middle way when he said, "In the past the poet responded to the demands of princes or the public. Today I am calling for an inversion of the relationship: it is I who am asking the public to accompany me on an adventure."

Over and above the occasionally symptomatic reactions of writers from other regions (including the English writer Ronald Harwood, President of PEN International, and the Arabic-speaking Israeli Sami Mikhaïl, reduced to silence), this meeting showed that Arabic literature finds itself halfway between withdrawal into the shell of Arab identity and a movement towards the freer atmosphere of world literature, beyond national expressions. When all is said and done, if there is a split, it is between those who cannot bring themselves to leave their citadel and those who journey, at their own risk, in joy or in pain, across the vastnesses of the world.

ABDELWAHAB MEDDEB

ALEXANDRE BLOKH,
a French novelist and literary critic, is the international secretary of PEN International. Under the pen name of Jean Blot, he has published a number of novels and stories, including *Les cosmopolites* (Gallimard, Paris, 1976) and *La montagne sainte* (Albin Michel, Paris, 1984). His most recent publication is an essay, *Vladimir Nabokov* (Seuil, Paris, 1995).

ABDELWAHAB MEDDEB
is a Tunisian writer whose most recent publications are *La gazelle et l'enfant* (Actes Sud-Papiers, Paris, 1992) and a translation into French of Suhrawardi's *The Western Exile's Story* (Fata Morgana, 1993).

Paul Scott Mowrer

The press and the public

In last month's "Archives" column we reprinted the pessimistic views expressed by the Colombian writer Baldomero Sanín Cano in his contribution to a study on the educational role of the press carried out by the International Institute of Intellectual Co-operation in 1933. Published below are excerpts from the contribution to the same study made by the American journalist Paul Scott Mowrer of the Chicago Daily News.

A newspaper may at times be literary and educative; it may reproduce a lecture or print admirable articles of an instructive or entertaining nature; it may publish a story or even, bit by bit, an entire novel. But it does not exist primarily for any of these purposes. A newspaper is not a speech or a radio talk, for it deals in the written, not the spoken word, and there is a vast distinction. A newspaper is not a magazine. It does not consist primarily of stories and articles slowly prepared far in advance and selected carefully at leisure. A newspaper is not a book. In no circumstances can it be thought of as the logical elaborate statement and development, through from beginning to end, of a plot or a thesis. Those who want to attend courses of study, or to enjoy literature, or to hear eloquence, or to go thoroughly into some subject, must attend a school or an assembly hall, must consult a book or a magazine.

A newspaper is something quite different. It exists for the purpose of giving its readers the news of the day every day. Everything else is secondary.

What then is news? It is a more or less skillful, more or less arbitrary selection of events snatched hastily from current life to be reported and spread before the reader with a minimum of delay.

What governs the selection? Why must some things be told but not others? Why are columns devoted to certain events but only a line or so to others?

In free countries, the selection of news is usually a compromise between what the proprietors of the paper think should be printed, and what the editors of the paper think their readers would be most interested in. Some papers are subsidized by special political or economic interests. The purpose of such subsidies is to influence the selection and presentation of news. But most great newspapers today avoid subsidies because they wish to remain independent. They seek to make profits by selling copies of the paper and by selling advertising space in the paper. For both these purposes, the more readers they have the more prosperous and free they will be. The determining factor in the selection of news is therefore usually, in the long run, the editors' idea of what will attract the largest number of readers.

Let us not deceive ourselves. Many experiments have been made, and it is now well established that newspapers devoted mainly to the fair and serious presentation of political, economic, scientific and artistic events must be content to sell few copies. The big circulations go to the papers which give only a minimum of space to such news, and devote their pages primarily to photographs and brief articles having to do with crime, sex, sports and cinema actors, with, by way of international interest, frequent chauvinistic attacks on foreign nations.

THE SO-CALLED 'AVERAGE READER'

This unpleasant fact has given rise to a good deal of soul-searching on the part of public-spirited editors. There are of course a great many people everywhere who do want to know what is happening that is significant in the world. The higher the general standard of education and of independent thinking, the more there are likely to be of such people. Must they then be deprived of serious news merely because the majority of readers do not appear to care for it? That seems unreasonable. Editors have therefore long striven to find a way out of the dilemma.

Text selected by Edgardo Canton

One popular assumption in newspaper circles has been that more people would be interested in serious news if it were not so ponderously written, if it were presented in ways more vivacious, simpler, more picturesque, more human. A great deal of ingenuity and patient effort was thus expended in the endeavour to interest by some artifice, as it were, in subjects like politics and economics, the numerous people who are not naturally interested in such subjects. An abstraction called "the average reader" was invented. The theory was advanced, and acted upon, that everything in the paper should be so presented that it would be comprehensible and interesting to this hypothetical average.

But of course no such average person exists. And despite many brilliant examples of popularization, the attempt to cater to this non-existent individual must be admitted to have failed, for the people not interested in the subject were still not interested, and those who were really interested resented the over-simplification, the distortions and the inadequacy.

THE COMING TREND OF SPECIALIZATION

A new and far better formula is therefore now gradually developing. Under this formula it is recognized that there are many sorts of people, with many and diverse interests. The aim of a newspaper seeking a large circulation should therefore be, not to interest everybody in everything, but to supply such a diversity of news every day that there will inevitably be something for everybody. Thus, in the same newspaper, we may now find regional, national and foreign news, news of crime and scandal, news of sports, of politics, of society, of finance and economics, news of the theatre, the arts, the latest books, the latest scientific discoveries, together with photographs of beautiful cinema stars, cheap fiction and strips of humorous drawings.

The implications of this new formula are only just beginning to be understood. It means that the news in each category can and should be so selected and presented as to appeal to the devotees of that particular kind of news. Sporting news should be written from the viewpoint and in the language of sporting people. Crime news should be written with a dramatic or a detective story touch. And political news should be written in a way that will appeal, not to shop-girls or to bicycle racers, but to people interested in politics. There are thus theoretically no limitations upon the degree of excellence to be sought in each category.

Practically, however, there is one insuperable limitation. It is an obvious one, but it is one which many critics of the newspapers seem not to take into account. This limitation is the high rate of speed at which it is necessary to gather, prepare and select news in order to put it before the readers without delay. This being so, the wonder is not that mistakes are occasionally made, but that they are not made more often. Only highly trained specialists can work successfully at this rate of speed, in the gathering, the preparation and the selection of news. And this, more and more, is what the newspapers are demanding: highly trained specialists in every department, whether sports, or crime, or politics.

I do not mean to say that there is no possibility of improving the newspapers. On the contrary, under the new theory of specialization in each category, we have a right to seek and to expect continuous improvement. The old incubus of the imaginary average reader is disappearing. Even an account of a chess match can now at last be written honestly for people interested in chess by a specialist who knows about chess, and the better he can make it, the better it will be for the newspaper. Given a free country with a high level of education and independent thought, there seems to be no reason why a public-spirited publisher cannot produce an honest independent newspaper with enough readers to make it financially successful and to enable it to command the services of competent journalistic specialists. Such a newspaper, by giving its readers the news, all sorts of news, in accordance with the varying interests of the public, will be fulfilling its true social function as daily purveyor of current information. ■

listening

A TIMELESS MOMENT

Isabelle Leymarie talks to

DEVASMITA PATNAYIK

Among India's countless forms of traditional dance, Bharata Natyam has experienced a remarkable revival and achieved international renown in the last fifty years. The same period has seen the steadily rising prestige of another very ancient sacred dance form, known as Odissi, whose home is the state of Orissa in southern Bengal, traditionally believed to be *ksetra* or sacred land.

The golden age of Odissi was in the twelfth and thirteenth centuries, when it was performed in the magnificent temples of Shiva at Bhubaneswar and of Jagannath at Puri and in the temple of the sun at Konarak. Today Odissi still draws inspiration from the sculptures and friezes that adorn these holy places, from sacred inscriptions and from classic treatises on *abhinaya*, the art of representation. Graceful, expressive and lyrical, its languid fluent gestures are imbued with nobility.

The origins of Odissi can be traced back to the second century B.C., the date of carvings in the grotto of Udayagiri, near Bhubaneswar, which show ritual dances with poses that are still used today. In the fourth century B.C. a remarkable theoretical treatise on dance known as the *Natya Sastra* mentions a choreographic style known as *odhra magadhi*, from which contemporary Odissi is derived. According to myth, Shiva and his son Ganesh, the elephant god and lord of the dance, taught certain poses to Manirambha, a celestial dancer who transmitted her knowledge to temple dancers (Devadasi). The development of Odissi was encouraged in the tenth century by King Chodagangadeva, the enlightened ruler who built the temple of Jagannath,

and 300 years later a sacred dance festival was held at Konarak. During the Mughul invasions of India young women stayed in their homes to protect themselves against the invaders, and male dancers who dressed like women and were known as Gotipua kept the tradition of Odissi alive.

Influenced by Jainism, Tantrism, Buddhism and Vishnuism, Odissi was danced by temple dancing girls called Mahari, court dancers known as Nachuni, and the Gotipua, who performed in public. Some time around the seventeenth century the Mahari and Nachuni faded from the scene, and only the Gotipua were left.

During the period of British colonial rule Odissi gradually shed its sacred aspect and became a form of entertainment for the ruling class. As before the Gotipua carried on the tradition, introducing supple and complex movements that were in some ways similar to gymnastics. The great practitioners of our times, Kelu Charan Mahapatra, Deva and Pankaj Charan Das were once Gotipua. Since independence in 1946, Odissi has recovered its former glory thanks to scholarly research and the interest of choreographers.

One of Odissi's most accomplished exponents, Devasmita Patnayik, gave a performance in Paris in 1991 during a series of cultural events organized as part of UNESCO's Silk Route Programme. On that occasion we asked her some questions about her art.

Are there certain basic poses in Odissi?

—Yes, there are three, the *chowka*, the four-square posture of the god Jagannatha, symbolizing equilibrium; the *tribhanga*, a triple body movement (head, hips and knees), a position that is commonly shown in ancient sculpture and is absent from other dance styles; and the *abhanga*, in which the weight of the body rests on one foot. Starting with these basic poses, modifications can be made which use the whole body—hands, head, eyes and other facial muscles.

Are the movements codified?

—In Odissi you find the same symbolic gestures and *mudras* (hand positions) as in other traditional Indian dance-styles. There are nine eye movements, nine head movements, thirty-six *mudras* executed with one hand—to evoke clouds, for example, or a forest, a river, a bud, a peacock and other birds, animals and natural elements—as well as *mudras* executed with both hands. Other gestures signify a window, a bow, a kiss, candlelight. . . . A typical Odissi movement consists in backing up on one's heels then pirouetting on one foot. Combining these movements and poses offers a wealth of possibilities. One can also improvise using this basic vocabulary. These movements are beneficial for both body and soul, for dancing communicates energy and encourages fulfilment. It raises awareness both of oneself and of the audience, transmits *Veda* (knowledge), and unites men and women with the divine.

What is the significance of the costumes you wear—those wonderful, purple, blue, red and grey saris, face, foot and hand make-up, and the headdress with white ornaments?

—Since dance is an offering, a devotional act and a search for perfection, the dancer must be beautiful, especially since she repeats the poses shown in magnificent ancient sculptures. The headdress symbolizes jasmin buds, which were often given as offerings in temples, and the make-up is governed by certain rules. In order to make the gestures more visible, the hands and feet are painted red—a colour symbolizing prosperity. My saris come from Orissa, and the "fan" (the central pleating) is very typical of that part of India. Every item of clothing has its own significance, and the saris of Orissa (like Odissi itself) are coming back into fashion all over India. You can even see them on television. The area between Puri and Bhubaneswar is also well known for its colourful appliquéd fabric. I wear silver jewellery because silver is the only metal worn in Orissa.

Does the dancer follow the music, or, as in many African dances, does she dictate her own beat to the musicians?

— She has to follow the beat, and since she wears bells on her feet, she can't afford to go wrong.

You sometimes do your own choreography. Does it follow any particular theme?

—Absolutely. I have created a dance based on the nine *navarasa* (main emotions). The emotions are love, heroism, sadness (or pathos), laughter, fear, anger, disgust, wonder and peace. (The term *rasa* means "savour, relish, juice").

Devasmita Patnayik then demonstrated the nine *navarasa*. First of all her feet took root in the fertile ground before beating the rhythm as her head and torso thrust heavenwards. Changing emotions flickered across her mobile features. Her face puckered in sadness, her eyes became fiery with anger and then rolled upwards in disgust. At last her body found peace, fulfilment and serenity. I watched this graceful and supple dancer, whose hands drew skilful arabesques, joined by the magic of movement in transcendent harmony with the forces of the universe. I felt the richness of her inner world, and left her with the feeling that I too had participed, for a moment, in the divine. ■

ISABELLE LEYMARIE
is a Franco-American musicologist.

A MAN AND HIS TIME

To mark Federico Mayor's sixtieth birthday, over a hundred of his friends from all over the world have decided to present him with a collection of written tributes in the form of a book entitled *Amicorum liber.*

Writers, artists and researchers, Heads of State, ministers and leaders of major international organizations have contributed texts which express, from the different standpoints and backgrounds of their authors, their attachment to Federico Mayor and his work.

The letters, pen-portraits and studies collected in this book constitute a description of the age in which we live, its victories and defeats, its ambitions and limits, its questions and answers. The recurring themes are peace, democracy, science, education, culture and history—all the hopes, dreams and projects with which the Director-General of UNESCO has been identified for many years.

The portrait of an ideal emerges from these pages, as well as the portrait of a man. An ideal which is shared by the contributors, who include Mohammed Bedjaoui, Boutros Boutros-Ghali, Camilo José Cela, Jacques-Yves Cousteau, Christian de Duve, Carlos Fuentes, Gabriel García Márquez, Maurice Goldsmith, Mikhaïl Gorbachev, Rigoberta Menchú Túm, Adolfo Perez Esquivel, Ilya Prigogine, Raymond Ranjeva, Édouard Saouma, Karan Singh, Mario Soares, Wole Soyinka and many other citizens of the world.

The future is built on the present, but everything originates in the heart. Whereas compassion and solidarity with suffering humanity seem more necessary than ever, hearts have all too often hardened. Selfishness is the dominant force in today's world. . . . Individuals, groups and nations must realize that selfishness breeds misfortune and death; they must overcome it and agree to share the wealth of which they are the trustees. We must all of us learn to give and to receive, without forgetting that the rich too can receive from the poor.

EDOUARD SAOUMA (Lebanon)
Director General of the Food and Agriculture Organization of the United Nations, 1976-1993

It is true that we have learned that differences can be in themselves an object of respect and a source of mutual enrichment. But when they take the form of manifest inequalities, we also feel that they are injustices. This feeling, today shared by all peoples and all nations, is an undeniable sign of progress of the human conscience.

BOUTROS BOUTROS-GHALI (Egypt)
Secretary General of the United Nations

In this new vision of human rights, three "generations" of rights, each naturally interlinked with the others, may be distinguished. First of all the individual rights, such as the right to life and to physical, psychological, intellectual and spiritual integrity, on which the dignity of the person is based. Next comes the second generation of rights, which concern health, education, work, information and other matters, and contribute to the quality of life. Finally, the third generation is that of the rights of peoples to development, a healthy environment, and self-determination. In a democracy regarded as a system based on solidarity, these rights represent intangible values and basic necessities.

ADOLFO PÉREZ ESQUIVEL (Argentina)
Winner of the Nobel Peace Prize, 1980

We suffer from three major imbalances: between the North and the South of the planet, between rich and poor within each society, between humankind and nature. . . . The three crises cannot be overcome separately. We shall not be able to build, at whatever level, harmonious relations between man and the environment if harmonious relations between men and between societies are not built at the same time.

DANIEL GŒUDEVERT (France)
First Vice-President of the International Green Cross

Not for a long time has the national or ethnic issue arisen in such an acute form or on so large a scale as it has today. . . . The significance of this phenomenon does not lie simply in the fact that it sometimes degenerates into outbursts of nationalism ending in bloody confrontations that are an affront to the conscience and common sense of humanity. . . . , but above all in the fact that a growing number of problems affect all peoples and cannot be solved by the efforts of individual states. Only humanity as a whole, acting as one, as a world community, is capable of solving such problems, reconciling national interests with, and if necessary subordinating them to, common human interests, and reconciling national sovereignty with the will of the community. This may well be the main social issue of the twenty-first century.

MIKHAIL GORBACHEV (Russia)
Former Head of State
President of the International Foundation for Socio-Economic and Political Studies

Relegated by enlightened and progressive nationalism to dismal nether regions, cultures have become "sleeping beauties".

Today they have awakened. Still as beautiful . . . but armed with teeth.

These vampire-like cultures are thirsty for the language and blood of their subjects. Sometimes we are sorry that we did not drive a stake into their heart while they slept. And we wonder whether a plait of garlic would not drive them away and with them the most hideous forms of chauvinism, xenophobia and genocide: ghettos, enclaves and ethnic purification.

CARLOS FUENTES (Mexico)
Writer

A well-known philosopher wrote that "science does not think". I reject that. Science thinks in total freedom. But it does not judge how the knowledge it produces is used. It is thus important to recognize the starting point and the destination of scientific truths. This is where ethical and moral reflection comes in.

JEAN-PIERRE CHANGEUX (France)
President of the National Consultative Committee on Ethics, Member of the French Institute

Federico Mayor, *Amicorum Liber*, Solidarité, Egalité, Liberté,
Etablissement Emile Bruylant, Brussels, 1995, 1,379 pp.

For further information and to order:
Etablissement Emile Bruylant S.A.,
Rue de la Régence 67,
B-1000 Brussels, Belgium.
Fax (32 2) 511 72 02

Tahar Ben Jelloun *An uphill task*

"A function of a fervour that has waned, of an imbalance that results not from an excess but from a lack of energy, tolerance holds no appeal for the young." So says the Romanian-born philosopher Emil Cioran in "Lettre à un ami lointain" (Letter to a distant friend), the first chapter of his book *Histoire et utopie* (History and Utopia). Adolescence is by its very nature a time of extremes. Some young people never grow into adults but sink into fanaticism and become desperately narrow-minded, their unshakeable beliefs extinguishing in them the spark of life, the spirit of dissent or quite simply the critical outlook in any shape or form.

It is thus difficult to talk about tolerance to those who live on a diet of wild slogans and inflammatory jibes and who are always in a hurry; but it would be suicidal for society to say nothing at all about the cardinal virtue of listening to others and respecting their views, beliefs and customs. Let us therefore teach tolerance, stripping it of its cloak of self-righteousness and its coats of varnish. Tolerance is a way of living, and it starts in the primary school.

Overcoming resistance

It has also to be admitted that human nature does not tend of its own accord in this direction. Human beings would appear to be fundamentally intolerant. The whole of the culture propagated by the civilized countries, those states where the rule of law prevails, is rooted in the fact that tolerance does not come naturally but has to be inculcated until it becomes second nature to people, spontaneous, a kind of reflex—a difficult task, given all the resistance and all the temptations to be overcome.

Cioran says that if the prospect of, or the opportunity for, a massacre is held out to them, young people will follow a leader blindly; such opportunities are constantly being offered to them by fanaticism in its political, ideological or religious manifestations. Suggestibility may take such harmless forms as fashions in dress or music, fashions that quickly come and go; but the readiness of the young to follow any charlatan and translate any outlandish idea into action makes it supremely important to get to work on and with them.

To make tolerance people's second nature is a duty that has to be done if the rule of law is to be established and consolidated. Without tolerance there is no democracy or, to put it another way, democracy and intolerance are irreconcilable opposites. Fanaticism is the fire surreptitiously lit by intolerance in the democratic fabric, it is a fixation, a deceptively pure-seeming obsession, an error that seeks to bring life—anything that moves, changes and holds surprises—to a standstill.

To tolerate fanaticism would be to tolerate the intolerable. How can fanaticism be allowed to monopolize the scene and make it a setting for tragedy? How is it possible to tolerate the enemies of freedom, those who would destroy intelligence and beauty, whose goal is a totalitarian order that imposes uniformity and proclaims that might is right, the law of the jungle? Where can one find the patience, courage and composure to refute this barbarity that prefers the use of the gun to that of the spoken or written word? How can one hold fast to one's principles, remain strictly respectful of beliefs different from, and even opposed to, one's own, and coexist with those who would wipe out anything that does not fit in with their crazed way of thinking?

Intolerance is only tolerable in art

Tolerance is an uphill task. It requires courage and strength, a robust aptitude for the cut and thrust of debate, and an ability to stand up to pressure. Who can claim to possess all these attributes? The answer is a combination of soldier and poet, policeman and philosopher, magistrate and artist—for all great literature and all great painting have been the expression of intolerance of the intolerable. The writer's subject is not happiness, nor is peace that of the artist. Art is a clean break, a rejection, anger, provocation even. When beauty is laid waste, intelligence done to death, childhood violated and human beings humiliated, art cannot but be intolerant. It tolerates neither the ugliness of which people are capable nor the revulsion they arouse.

Fanaticism can be countered with humour; but this is sometimes a risky undertaking, since those who are fixated upon a certain order of things detest wit, subtlety and of course laughter. What they hold sacred is dogma, rigid and immutable. It is forbidden to make fun of it, whereas life, being short and beset with pitfalls, commends laughter as the best course. Laughter is often provocative, a way of distancing oneself a little from reality; but distance is something that has been totally banished from the world of intolerant people, who are so bound up in themselves they would like the rest of humanity to be identical clones of themselves.

Tolerance is something that has to be learned, a requirement that has to be lived with every day, a difficulty to be faced every moment of every day. It is hard work, but those who are attached to principles rather than prejudices or compromises do not seek the easy way out. They may not sleep soundly, it is true, but at least they do not relinquish that which makes us human, our dignity. ■

LETTERS TO THE EDITOR

THE WRONG TRACK?

An article by Jean Daniel published in your December 1994 issue ("Religion and Politics Today") contains the following elliptical and to my mind bewildering statement: "liberalism . . . ended up in nazism." It seems to me that it was in the name of liberalism that Great Britain (where this doctrine was born) led the fight against Hitler's ideas and practices and that thousands of American troops left their own country (where liberal ideology is not entirely unknown) to rid us of nazi ideology.

In the same issue Régis Debray makes a surprising juxtaposition when he derides "clerics and mafias. . . ." Do the priests who teach my children about loving their neighbour and respecting others belong to a terrible criminal organization? The same author describes religion as "the vitamin of the weak". This "vitamin" does me a great deal of good, and my "weakness" does not prevent me from appreciating the open-mindedness of the *Courier*, even when its writers seem to me to swerve onto the wrong track.

Marie Varène
Paris (France)

FAITHLESS BUT NOT FACELESS

One might have expected to see an atheist's point of view expressed in your December 1994 issue, if only in general terms. Not so. The word "atheist" is seldom heard these days; it disturbs people. Atheists are regarded as "different", even in the West. In some countries atheism is punished by death.

Many thinkers have proclaimed their lack of religion down the centuries, among them Democritus, Epicurus, Lucretius, Victor Hugo, Emile Zola, Bertrand Russell and Jean Rostand. They too were "different". Their influence was inimical to faith and religion.

It is because of cultural progress that the Catholic Inquisition is unknown in the modern Western world, whereas religious terrorism is rampant in other regions.

On the eve of the year 2000 why did you not take account of the fact that there are tens of millions of human beings without faith or religion, and that they breathe the same air as those who believe in divine providence?

When providing information with an ideological content, the expression of an opinion should not exclude the expression of its antithesis, if only to give readers an opportunity to make a free choice. That is the price of credibility.

Jean Vidal
Puechabon (France)

FUNDAMENTALISM AS A MISGUIDED FORM OF POLITICAL OPPOSITION

Fundamentalism is not a blueprint for society deriving from a historical reality, either recent or remote, nor is it based on detailed analyses of economic, social or political conditions. It is a form of protest against corrupt, mediocre government.

A society becomes an easy prey to obscurantism because of the greed, the hunger for power and the irresponsibility of its leaders, and the bankruptcy and diversion of politics from its original purpose—the management of state affairs in a spirit of justice and equality.

It is reckless to claim, today, that fundamentalism is a political movement with majority support. It is a crime to abandon millions of people, who have been reduced to silence by oppressive and divisive political leaders, to executioners and fanatics who claim they are "saviours of humanity". How many more crimes will have to be committed before people cry: "Stop! We want no more of our history written in blood"?

Slimane Mehri
Paris (France)

SETTING AN EXAMPLE

In his *Commentary* column in your May 1994 issue, Mr. Federico Mayor writes that the poor are becoming poorer and the excluded are being increasingly relegated to the sidelines of society. I would add that humanity consists of human beings and that by relying on their capacity for self-improvement, through the influence of an enlightened few, humanity might be able, if it isn't too late, to rectify this situation. So many people do not know where to turn that perhaps the *Courier*, for example, could present some examples of individual behaviour that people might follow.

Jean-Michel Delvat
Grand-Quevilly (France)

ACKNOWLEDGMENTS

Cover, page 3: © Dagli Orti, Paris. Egyptian Museum, Turin. **Page 5:** © Jerry Bauer, Editions Liana Levi, Paris. **Pages 8 (above), 12:** © Dagli Orti, Louvre Museum, Paris. **Pages 8 (below), 11, 13 (below), 16, 17, 18 (right):** © Charles Lénars, Paris. **Pages 8-9:** Pascal Dolémieux © Métis, Paris. **Page 9:** © Edimédia, Paris. British Library, London. **Page 10 (above):** © Dagli Orti, Paris. Archaeological Museum, Beirut. **Page 10 (middle):** © Dagli Orti, Paris. Archaeological Museum, Aleppo. **Page 10 (below):** © Dagli Orti, Paris. Casa de Murillo, La Paz. **Pages 13 (above), 23 (below):** © Réunion des Musées Nationaux, Louvre Museum, Paris. **Page 14:** © Cosmos, Paris. **Page 15:** © Pierre Colombel, Paris. **Page 18 (left):** Mireille Vautier © ANA, Paris. **Pages 19, 20 (below), 21, 38:** Roland Michaud © Rapho, Paris. **Page 20 (above):** © Hassan Massoudy, Paris. **Pages 22-23:** © Museum für Völkerkunde, Berlin. **Pages 22 (below), 23 (middle):** All Rights Reserved. **Page 24:** Michelangelo Durazzo © ANA, Paris. **Page 25 (above):** © Dagli Orti, Paris, Private Collection. **Page 25 (below):** Françoise Huguier © Rapho, Paris. **Page 26:** © Jean-Loup Charmet, Bibliothèque Sainte Geneviève, Paris. **Page 27:** Paulo Nozolino © Vu, Paris. **Page 28:** Abbas © Magnum, Paris. **Page 29 (above):** Edimédia, Paris. **Page 29 (below):** Bernard © Anako, Paris. **Page 32:** UNESCO-Ines Forbes. **Pages 34-35:** © Monique Pietri, Paris. **Page 35 (above):** Jean Cassagne © Rapho, Paris. **Pages 35 (below), 36 (below):** Gérard Sioen © Rapho, Paris. **Pages 36 (above), 37 (below):** © Ruth Massey, New York. **Pages 39, 40 (below), 41:** Yves Gellie © Icône, Paris. **Page 40 (above):** © France Bequette, Paris. **Page 42:** © IUED, Geneva. **Page 47:** © Devasmita Patnayik, Paris.

UNESCO is now on-line via Internet

gopher unesco.org

or

url:http://unesco.org:70

Currently on-line are: UNESCO press releases, addresses, fax, telex and electronic mail numbers of UNESCO's regional offices, National Commissions and UNESCO Clubs, the directory of UNESCO databases and information services, an index of the contents of the last 22 issues of the *UNESCO Courier*, colour images of the Japanese Garden and other architectural sites at UNESCO Headquarters, as well as works of art such as Henry Moore's reclining sculpture.

To contact the *UNESCO Courier* directly with suggestions and comments on the magazine, type:

unesco.courier@ unesco.org

Special offer ✱✱✱✱✱✱✱✱✱✱✱✱✱✱

Unesco Courier subscribers:
Offer your friends –and yourself– copies of this new publication

What happened to development?

From 40 internationally-known specialists, the latest thinking on the problems of development in the world today.

In June 1994 Unesco organized an international symposium on the theme "What happened to development?"

Participants: President François Mitterrand, Unesco's Director-General Federico Mayor and some forty world renowned intellectuals, researchers, economists and experts on development.

"What happened to development?" contains résumés of the participants' contributions and a synthesis of the discussions. A 90-page round-up of current ideas on the problems associated with development today, in the North and in the South.

Special price for Unesco Courier subscribers:
40 French francs (postage included)
Regular price: 60 French francs (postage included)

Send your order with your remittance, made payable to *The Unesco Courier*, 31 rue François Bonvin, 75732 Paris CEDEX 15, France

Payment in French francs by cheque (except Eurocheques) or by Visa, Mastercard or Eurocard (give card number and expiry date)

LISEZ TOUS LES MOIS

ÉTVDES

Revue d'information, de réflexion et de culture

Dans les prochains numéros :

Paix et turbulences au Népal	Guillaume KOPP
Clinton le « nouveau démocrate »	Norman BIRNBAUM
Mondialisation, délocalisations, exclusion	Jean PLUCHART
L'homo sovieticus, cinq ans après	Boris DOUBINE
Roumanie : le salut par la culture (interview par J.F. BOUTHORS)	G. LICEANU

Choix de films, Chroniques de théâtre, Revue des livres, Choix de disques

Le n° : (144 pages) 55 F, étr. 62 F
Abonnement : 11 nos / an : 460 F - étr. 560 F

Rédacteur en chef
Jean-Yves CALVEZ

Pour recevoir un numéro ou vous abonner, envoyez vos nom, adresse et règlement à l'ordre d'ETUDES à :
Assas Editions • 14, rue d'Assas - 75006 PARIS - Tél. : (1) 44 39 48 48
Ou, sur Minitel, tapez **36 15 SJ*ETUDES**

THEME OF THE NEXT ISSUE
(MAY 1995):

PILGRIMAGES

INTERVIEW WITH

THE ABBÉ PIERRE

HERITAGE:

MYSTERIOUS PERSEPOLIS

ENVIRONMENT:

THE HAZARDS OF MINING

Each month, essential reading for an understanding of the problems of today and tomorrow

three good reasons for offering your friends a gift subscription:

1

The UNESCO Courier is the only international magazine published in 30 languages and read by hundreds of thousands of people in 120 countries

2

Each month it explores the astonishing diversity of world culture and knowledge

3

It associates its readers with UNESCO's mission of furthering "universal respect for justice, for the rule of law and for human rights and fundamental freedoms...without distinction of race, sex, language or religion..."